Clinical Lecture

ON THE

DETAILS NECESSARY IN THE PERFORMANCE OF ABDOMINAL SECTION.[1]

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GENTLEMEN,—We have now got to that position in our course at which it becomes necessary for me to demonstrate to you the details which must be attended to in the performance of an abdominal section, and my purpose in this direction has been made capable of easy display by the ingenuity of my friend and colleague, Mr. Christopher Martin, who has, as you will see, arranged a dummy upon which I can perform a number of the operations in gynæcology. By "abdominal section" we mean a rigid inclusion of all cases in which the peritoneal cavity is opened, and we do not in our estimates include any other cases, no matter to what extent operative proceedings may have taken place almost in the abdominal cavity. The division is, like all of its kind, purely artificial and not entirely accurate, but it is so convenient that I for one have given my adhesion to it, and, except that it every now and then involves some little confusion about some individual case as to whether it may or may not be an abdominal section, it affords an extremely convenient basis of statistical record. The simplest form of abdominal section is that which we call "exploratory incision" or "confirmatory incision," and up to that point, with very little deviation, all abdominal sections are identical; and the real difficulties begin at that point where, having opened the abdomen, we are determined not to close it again without completing an operation which will be more than exploration or mere emptying the cavity of a quantity of serous fluid.

But you have to be prepared to meet all kinds of emergencies and incur every complication, and be ready to deal with them; indeed, so much is this the case that I warn you never to regard any exploratory incision lightly; for all you may know it may end in what you little expected—one of the gravest operations in our surgical lists. Be prepared, therefore, in all cases with your full armamentarium, ready to do anything. In considering how you will best perform an abdominal section upon any patient, your first consideration of course will be the surroundings of the patient—where shall the operation be done? So forcibly have we been struck by the advantages which hospital patients possess over those in private practice, in that they are under the discipline, conduct, and constant guiding direction which are impossible in a private house, that a custom has grown up, which I follow to a very large extent, of dealing with all my patients in institutions devoted to the purpose, and in which nothing else is done. There are many reasons in favour of this practice, some of which are not immediately under our notice, but they may be summed up to this effect—that the patients are placed under conditions in which external complications likely to be adverse to their interests are excluded, and they are removed from those exciting incidents of domestic life and those mistaken interferences on the part of misguided but well-intending friends, which cannot be avoided in the private house. I have constantly had to experience during an exceptionally extensive practice that the most hostile influences against the recovery of my patients are directed by well-meaning friends, and that these friends are far more troublesome to deal with than the patient herself. Countless illustrations of this I might give you, but the end of it is that I always advise my clients to this effect—that operations performed in private houses, or in houses not regulated for the purpose of this particular kind of work, add a very serious and large percentage to the risk of any operation; and this is increased just in proportion as the severity of the operation is advanced. It is perfectly true that I have over and over again performed operations of emergency in the most wretched hovels—in lofts over stables, and under sanitary conditions where one would almost certainly expect the patient to die, yet where recovery has taken place; but such exceptional experiences are no argument against the conclusions that I have come to. Some patients and their friends, however, are ill-advised enough to insist upon operations of the most serious kind being performed in their own residences, at a distance from the immediate supervision of the medical attendant or operating surgeon, and nothing can be done but to give way to their desires and to accept the increased risk. Public opinion, however, is rapidly maturing against this practice, and I venture to say before long that it will only be operations of emergency which will be performed at the homes of the patients.

The next condition is that you must attach to the patient a specially trained nurse, and this is the line of life in which nurses require special training just as much as the surgeons do, for there are minute details of nursing attendance on these cases to be observed, of infinite importance to the patient, which a nurse whose training has been only general would be certain to regard as not essential. For the due preparation of the patient, after her sanitary conditions have been made as satisfactory as possible, all that is necessary is that a slight aperient should be given the night before, and that some few minutes before the operation is performed the lower bowel should be washed out by an enema. The reasons for this are twofold—first, distended intestines get in the way of the operator's fingers to an extent that empty intestines do not, and it is essential to give the patient as much pelvic and abdominal rest as possible for the first eight-and-forty hours after the performance of the operation. I always prefer that the patient should receive no nerve shock by seeing any kind of preparations for the proceeding. The room in which the patient is to stay and in which the operation is performed is never disturbed till the patient has been anæsthetised, and as soon as this has been completed sufficiently, at a given signal nurses enter the room and silently lift carpets, move furniture and introduce the necessary apparatus. The patient is placed upon an operating table, which is simply a deal board resting upon two trestles; as I deprecate all kinds of complicated apparatus, I deprecate any kind of complication in the table upon which I am to perform the operation. It carries the patient easily and steadily, and can be carried easily by one person. On it is laid a folded blanket and a couple of pillows. The patient is secured to the table by a couple of webbing belts, one tied tightly just above the knees and the other passed round the forearms and tied under the table, so that no kind of assistance is required to steady the patient in the event of any struggling. A light warm wrapper is placed over the limbs and a clean towel over the chest and another towel is placed over the wrapper, and upon this the instruments are laid. Again I say that in all my instruments two things have to be regarded; first of all, scrupulous simplicity, and, secondly, scrupulous cleanliness. A good deal has been written the last ten or fifteen years upon so-called antiseptic methods of performing operations, and antiseptic precautions to be taken during the performance of the operation and after it. I do not propose to take up further time in discussing a matter which clearly has come to its end, save to note that the last assertion of those who advocate these antiseptic precautions is that antiseptics really mean absolute cleanliness. But this is not the case. It is a mere perversion to say anything of the kind, for eight or ten years ago the antiseptic doctrine was to overcome the entrance of germs by the use of potent chemical substances. We, who are opposed to the antiseptic doctrines and the antiseptic practice, argued that the germs were harmless if dead and dying material upon which they might feed were removed from the wound. The washing out of the abdomen, therefore, for the careful removal of all clots, dirt, and débris, and the free use of the drainage-tube, form the complementary practice of essential cleanliness, and paved the way to our recent enormous advances in abdominal surgery. I venture to predict that four or five years hence the use of the term "antiseptics" will be dropped, and we shall hear no more of this strange phase of surgical eccentricity. Simplicity of apparatus is the end to which I have ceaselessly striven, and you will see, therefore, that my whole armamentarium of weapons consists of simple little knives, simple catch forceps, a simple cannular trocar, and, for the special operation of hysterectomy, a simple wire clamp. You can carry the whole set of instruments in one coat pocket.

[1] Delivered July 13th, 1891, at Queen's College, Birmingham.

The patient you now suppose to be anæsthetised, and I am about to commence my operation. You will see I take my knife in my hand as if I intended to cut by it, and not to write a prescription; with the pad of my forefinger placed just where the steel blade and the wooden handle meet on its right-hand side, I steady it with its point downwards and send it straight through the skin at an angle of 45°, rapidly drawing it down through that part of the skin I wish to divide with its edge at an angle of 23½°; I bring it out where my incision is to end again in a rectangular position, thus making a clean, well-made tailless incision exactly the length I require and dividing at one blow everything down to the tendinous aponeurosis. The next proceeding is to divide this structure, and you must divide it in a way exactly the opposite of that in which you are told to divide it in text-books, where instructions are given to divide the linea alba; that is just the thing you must not divide. What you must do is to open the coat of the tendinous covering of one of the recti muscles, it matters not which, and, lifting the edge of the muscle outwards, you must divide the coat of the tendon on its inner side, for in this way you have some kind of security that you will have tendinous reunion, and that you cannot be sure of if you divide the white line. This double tendinous division you make as far as you think requisite; that will be as far as you have divided the skin; and then, by a few touches, you divide the subtendinous fat and come upon the transversalis fascia, a structure which you can easily recognise by its characteristic linear markings. You will notice that I say nothing about directors; in such operations directors ought never to be used; they are clumsy elements of danger which the experienced surgeon will never employ. Instead of them he will take a pair of his catch forceps, and he will take a delicate grip of the transversalis fascia, including, if he likes, the peritoneum in the same embrace, and he will take another smaller grip about half an inch away from the first, and in the same horizontal line. The assistant will put upwards and outwards one of these pairs of forceps, and the operator will pull up the other and nearer towards him. Between the two a slight ridge of fascia and peritoneum will rise, and a slight notch with the knife through this ridge will, if it open the peritoneum, immediately reveal a little chasm, the air entering the notch, and all below it will at once fall away. If he has not opened the peritoneum by his first cut, he will seize the peritoneum similarly, notch it, and then the subjacent textures, if they have not been embraced by the forceps as I have said, will disappear. A clumsy operator may seize omentum or even intestine in the forceps' grip, but such a mistake the light-fingered and skilful manipulator can easily avoid. If, however, such an undesirable embracing should have occurred, care must be taken not to divide these structures. The moment the air has entered the peritoneum—the black space beyond the opening will make the fact evident—the forefinger of the left hand must enter the cavity, and there must be no further use of the knife. The extension of the incision must be made by a ripping process by the fore and middle fingers, and must be continued till the opening has been made as extensive as that of the skin. Your abdominal section is now complete, and you see that I begin at once my exploration. It is impossible for me to enter now into details as to the hundred and one things which may be met with, each of which has to be discriminated and an instantaneous decision arrived at as to future proceeding. This, so far as I can find time for it, will be the subject of future discussion.

I am now supposing that we are dealing merely with the initial process of abdominal section, and up to this point the operation is one which ought to be familiar to every practitioner of medicine, for there is no line or condition of professional life in which there is absolute freedom from the performance of such an operation as this. There are many cases, the great majority of instances of diseases in the abdomen, which are what we may call operations of election, in which there is ample time to discuss the merits of the proceeding, the places and conditions in which it should be carried out, and to select the person by whom it shall be performed, and in such cases it will be unwise on the part of anyone not accustomed to deal with such cases to enter into their performance. It would, as a parallel instance, be extremely unwise of me deliberately to proceed to an operation for the cure of aneurysm by tying the femoral artery, an operation of election which is altogether outside my line of life; but in the hours of midnight on the broad waters of the St. Lawrence I was called upon to tie the brachial artery under conditions which admitted of no delay; and whilst for the moment absolutely uncertain of the relations of that important trunk I might have committed serious blunders in the performance of the operation. I had to do the best I could for the patient, who otherwise would have lost her life, finally with a satisfactory result. So at any moment one of you in after life might be called upon for the relief of intestinal obstruction or for the relief of an incarcerated hernia, for the arrest of hæmorrhage from a ruptured tubal pregnancy or for the relief of an impacted labour, to perform the operation up to this point, and therefore you must be familiar with it, and you must also be familiar with certain other proceedings which in these cases of emergency proceed at once from this point.

It is impossible to expect that I should turn out all of you accomplished abdominal surgeons, but I do expect and I certainly hope that in your future practice, wherever you may be, none of you will either hesitate or be found incapable of opening an abdomen in order that you may do the best you can for the relief of any serious emergency such as I have instanced.

Let me now suppose that, in dealing with a case of malignant disease with ascitic effusion, you have emptied the abdominal cavity of the fluid as fully as you can, and that you find the conditions such that nothing more can be done, or that you have found some of the serious conditions to which I have alluded, and that you have done the best to remedy them. What further steps are necessary for the conclusion of your abdominal section? During the process of the making of your wound there has been some bleeding, perhaps one or two arterial points which required to be secured. These catch forceps, the original invention of M. Koeberle of Strasburg, enable us to dispense with the old-fashioned process of tying arteries almost completely, for as each bleeding point is noticed a pair of these forceps is applied, they are left to themselves, and the succeeding steps of the operation are proceeded with. By the time it has been accomplished the forceps may be removed, and it will be found in all probability that the forcible temporary pressure exercised by them has been sufficient to arrest the bleeding. It is quite rare in my practice that a vessel in the abdominal wall has to be tied. You have sponged away all clot; if necessary you have washed out the abdomen; you have secured by various contrivances, of which I shall afterwards speak, bleeding points that may have been met with in the abdominal cavity; you have carried through the various steps of the completed operation which may have become necessary, and now you are about to close the abdomen. It may be that you have had to introduce sponges. Be careful, be *most* careful, that you know exactly what you have done in this particular; no precautions that you can take concerning the cleanliness and good quality of your sponges can be too great; no precautions can be too great to insure that you have a known quantity of sponges, and that you take away from the operating table just as many sponges as you brought to it—in fact, to secure that you leave nothing inside the patient's abdomen that was not there when you began. And now you have to close the abdomen. In spite of all that has been written on this subject, and in spite of all the useless experiments which have been made upon animals for the purpose of settling questions which ought never to have been raised, there is only one consideration that need guide you—that it is your duty to restore the parts you have disturbed to a condition as nearly as possible that in which you found them. You have divided skin, subcutaneous fascia and tendon (it may be also muscle), and peritoneum, and as all these structures have been divided, so they must all be put in such apposition that they may heal as accurately as possible. For this purpose there is nothing so good as a common sewing-needle and a piece of pure silk introduced as a continuous suture, but not drawn tight. You will see, as I proceed here, I leave a large loop at each insertion of the thread, and I do this with a purpose. First of all, it guides me in the more accurate insertion of my needles; secondly, it may be that it enables me to renew my sponging should that become necessary, for the continuous nature of the thread will not permit of its disturbance, and then the stitching is far more rapidly done in this way than by any other method. You have to decide whether or not you will insert a drainage-tube, and

upon that point I may have to give you some further instructions. All is finished save the closure of the wound. Let your needle and thread have been so inserted with regularity and evenness that the divided structures will come easily and fairly in apposition, skin to skin, muscle to muscle, and peritoneum to peritoneum. You will begin at one end of the wound, and you will fasten each point of suture first by a double hitch and then by one hitch over these, in order to diminish the chances of a "granny" suture. You must bear in mind that these sutures may have to bear very violent strain if the patient vomits. As each suture is completed the threads are divided by the scissors, and then you will find that the continuous suture is easily reduced to a gracefully arranged series of interruptions. Your dressing need consist only of a piece of unmedicated dry cotton-wool; or if you adopt, as I have done for the last few weeks with some advantage, an additional agent for drying your wound and keeping it dry (for that is the best of all forms of true antiseptics), the powder of boracic acid will be found the most satisfactory drying agent for any kind of wound.

Subsequent treatment of the wound need concern you very little; the chances are ninety-nine out of a hundred that it will heal without the slightest disturbance. You may require to renew, however, from day to day the dry dressing. The chance is that you need never disturb it till the sixth or seventh day, when you go to remove the sutures. If your wound has been extensive, and if the abdominal walls are thin, as they are in many of the cases of large tumours, and the sutures numerous, you will not remove them all at once, but you will remove alternative sutures, say, on the sixth day, and the rest on the eight or ninth. If a wound is fairly dealt with and kept perfectly dry, especially if the silk which is used is quite pure and has had its gum thoroughly removed by a scalding in hot water, you will not be troubled by stitch abscesses. If these do occur, you may sometimes be alarmed by a marked increase in temperature and pulse curve, sometimes to an extent which causes anxiety; but in the future treatment of your patient—if the instructions I have given you are followed out—you will find that the progress of the case towards recovery will be uniform and uninterrupted. The risk of a simple exploratory incision of this kind is a mere bagatelle, the assurance given by it that your patient suffers from a disease that cannot be relieved is complete, and in many instances a preconceived opinion that the patient is beyond hope is corrected, and a great surgical triumph may be the outcome of what seemed at first a hopeless and useless proceeding.

ON THE RADICAL CURE OF HERNIA, WITH ESPECIAL REFERENCE TO CERTAIN METHODS OF OPERATING.

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A CONSIDERABLE experience of the radical cure of hernia, strangulated and non-strangulated, in patients of all classes, ranging in age from one year to sixty years and upwards, leads me to submit the following conclusions, which will, I believe, in a general way, be accepted by the majority of surgeons who have had opportunities for acquiring extensive practical knowledge of the subject.

1. In patients who are otherwise healthy, the operation for the radical cure of hernia, by competent hands, in properly selected cases, entails no more risk to life than is continually present in almost all persons suffering from rupture.

2. In subjects up to the age of twenty-five or rather more, a perfect result may be often confidently anticipated, no truss being subsequently required under ordinary circumstances, provided that a proper operation be performed.

3. Between the ages of twenty-five and sixty-five a perfect result is attainable in some of the cases in which the rupture can as a rule be kept up by a truss; in cases in which a truss fails to prevent the continual or frequent descent of the hernia a radical cure, in the true sense, may be accomplished in a few instances, and in the remainder the parts may be at least put in a condition which will allow the truss to act with safety, certainty, and comfort.

4. The greater certainty of a perfect result in the class of younger subjects is to a considerable degree explained by the natural tendency to closure of the ring from general contraction of the parts involved, in consequence of their resilience and developmental inclination.

5. In the class of older patients the probability of complete success is in directly inverse ratio to—(*a*) the age of the subject, (*b*) the chronicity of the rupture, (*c*) the size and rigidity of the hernial aperture, (*d*) the amount of bowel contained in the sac, and (*e*) the extent of the adhesion of the gut to the sac, omental adhesions to parts other than the bowel being no necessary bar to success.

6. The essential requirements of any properly devised operation are—(*a*) the provision of an effectual barrier across the internal aspect of the aperture through which the hernia escapes, and (*b*) the abolition of the hernial fossa in the peritoneum over the abdominal orifice of the canal.

7. In inguinal hernia the closure of the canal by sutures after the sac has been dealt with is altogether of secondary importance to the requirements just indicated. It is, however, most desirable that the canal should be thus closed as far as possible, especially with the object of aiding the natural tendency to closure which exists in young subjects and in all cases of recent hernia. Under any circumstances the sutures at least keep the parts approximated during the consolidation and adhesion of the structures designed to ultimately form the permanent barrier to the descent of the rupture.

In femoral hernia the closure of the crural canal by sutures is unnecessary; moreover, from the nature of the parts and their anatomical relations, it can hardly be considered practicable in any useful sense. On the other hand, in umbilical hernia, which in some respects stands alone in its relation to the radical cure, the chances of a perfect result depend entirely upon the closure of the ring.

8. All operations which leave any portion of the sac or omentum actually engaged in the ring or canal, whether fixed by sutures or not, are, for obvious mechanical reasons, faulty in principle and defective in practice.

9. Having regard to the necessary uncertainty and inconvenience connected with the use of trusses, and bearing in mind the undoubted fact that any person who has been the subject of rupture in childhood is especially prone to develop hernia later in life, although the original rupture may have apparently undergone spontaneous cure after the prolonged use of instrumental pressure, the operation for the radical cure may be conscientiously recommended and practised upon sound surgical principles in the following conditions occurring in otherwise healthy people up to sixty years of age:—(*a*) Cases of hernia in young subjects; (*b*) herniæ in which trusses are entirely useless, partially effectual, or effectual only at the cost of pressure which is sufficient to cause pain or serious discomfort; (*c*) irreducible hernia; (*d*) cases in which the occupations or necessary amusements of the patient tend especially to strains of a kind likely to force the rupture down; (*e*) cases in which the continual use of trusses, whilst not actually painful, is irksome or intolerably inconvenient; (*f*) herniæ occurring in candidates who have been rejected, or anticipate rejection, for the public services on account of "physical defect"; (*g*) all cases of strangulated hernia, occurring at any period of life, in which the bowel is sufficiently free from adhesions, and otherwise in a fit condition to be returned with perfect safety into the abdomen, the state of the patient being at the same time good enough to justify the necessary prolongation of the operation.

Of the many points of interest suggested by the above conclusions I propose to confine myself for the present mainly to the discussion of certain operative measures for the radical cure, with which I have good reason to be satisfied. The first of these differs somewhat in its details from any other plan that I have seen recorded; and the second is, so far as any published methodical proceeding is concerned, I think, a new modification. My object, however, in calling attention to this operation is not to claim any novelty for it, which is a matter of no consequence whatever, but merely to describe a method by the utilisation of material commonly sacrificed which in suitable cases offers, in my opinion, a better prospect of permanent relief than any other treatment with which I am acquainted.

Regarded solely from the point of view of the technique of operative measures for the radical cure, cases of hernia consist for practical purposes of two principal kinds. In the first of these the sac contains bowel or omentum alone, and in the second it is occupied by omentum together with bowel. Cases in which the sac contains bowel only are

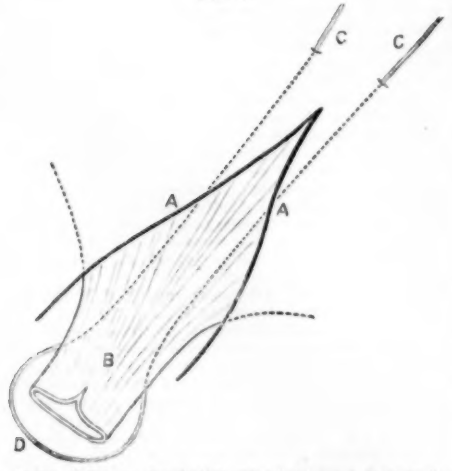
most uniformly met with in young subjects, in whom omentum is very rarely indeed found alone in the sac, and does not often form a portion of the hernial tumour at all, excepting in unusually large ruptures which have generally been much neglected. In middle-aged and old subjects, on the other hand, omentum commonly forms either a considerable portion of or, as not infrequently happens, the whole contents of the sac. It may also be accepted without reserve that, in cases in which both bowel and omentum together occupy the sac, the ring is larger, its margins more rigid, and therefore more difficult to approximate than in cases in which either bowel or omentum exists alone. It follows, therefore, as a natural consequence that cases in which the sac contains gut and omentum together present, in an ordinary way, more obstacles to effecting a permanent "cure" than the other class of hernia.

I.—CASES IN WHICH THE SAC CONTAINS BOWEL OR OMENTUM ALONE.

In cases of inguinal and femoral hernia, in which the sac is occupied by a knuckle of gut only or a solitary mass of omentum, the indications for the radical cure appear to be effectually met by simple invagination of the whole or a portion of the sac (that is to say, turning it inside out), and attaching the fundus of the invaginated part at a point some distance above the abdominal orifice of the canal through which the hernia descends.

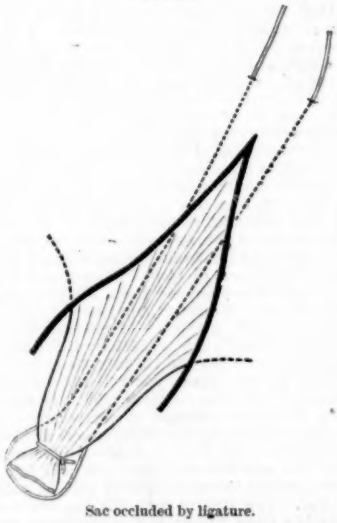
Details of the operation by invagination in inguinal hernia.—The upper part of the sac, the external abdominal ring, and the aponeuroses around for an inch or thereabouts, are exposed freely by an incision through the superficial parts in the direction of the long axis of the hernial tumour. The sac, after having been carefully isolated from its connexions just below the external ring (the lower part being left entirely undisturbed) is opened, and the contents reduced into the abdomen if they have not already returned spontaneously. Should the hernia consist of omentum only, this must be freed from adhesions, if any exist, the redundant portion ligatured and removed, and the stump returned. The sac is now divided just below the external ring, the distal portion being allowed, after all bleeding has been averted, to drop back into the scrotum. The proximal part of the sac is next separated from the sides of the canal as high up as the internal ring by gentle manipulation. One finger (or more if the ring is large) of the left hand having been introduced into the abdominal cavity through the neck of the sac, any bowel lying near the internal ring is pressed back out of the way. An ordinary pile needle on a handle (unthreaded) is then made to enter the abdominal aponeuroses about three quarters of an inch above the upper margin of the external ring, a little to the outer side of its middle line, and transfixes the whole of the aponeuroses and peritoneum impinging on the end of the finger which occupies the neck of the sac. The needle, guided by the finger, is passed down the inside of the sac and made to pierce its outer wall at a point about half an inch from the cut edge. The needle having been threaded with a tendon or catgut suture, previously prepared, and not less than twelve inches long, is withdrawn, taking one end of the suture with it. The result is that one end of the suture is seen passing into the abdominal aponeuroses above the external ring, whilst the other issues from the outer wall of the proximal part of the sac near its cut edge. The needle, again unthreaded, is now made to transfix the abdominal aponeuroses and peritoneum, about half an inch internal to the point at which it entered before, traversing the sac in the same way, finally piercing the inner wall at about the same distance from the cut edge as it had done on the outer side. After having been threaded with the lower end of the suture, the needle is withdrawn, carrying the suture, as before, with it. The two ends of the sutures will now be seen entering the aponeuroses above the external ring and forming below a loop over the cut edge of the proximal portion of the sac, as shown in Fig. 1. The open end of the sac is next occluded by a few stitches of catgut, or by means of a silk ligature placed around it as close as possible to the spot at which the suture pieces its walls (Fig. 2). The succeeding step is the invagination of the sac, which is effected by pushing with the finger the closed end through

FIG. 1.



A, Pillars of ring. B, Sac divided and isolated. C, C, Invagination sutures passing through aponeuroses and forming loop, D.

FIG. 2.



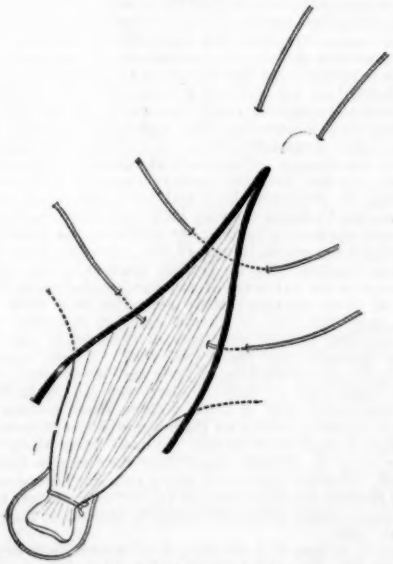
Sac occluded by ligature.

FIG. 3.

The dotted line shows the sac reduced and turned inside out.

the canal into the abdomen, the invagination sutures, passing through the aponeuroses above the external ring, being at the same time drawn tight. By this proceeding the sac is turned completely inside out (Fig. 3), and its fundus firmly attached to the peritoneal surface of the anterior abdominal wall some distance above the internal ring. The margins of the canal are then brought together in the usual way by stout silk sutures which pass through the whole thickness of each wall, a drainage-tube placed in the portion of the sac remaining in the scrotum, the superficial parts brought together with horsehair stitches, and an antiseptic dressing carefully applied. Unless the hernial canal is very small indeed, it is better, although not absolutely necessary, that the upper one or two sutures used for bringing the walls of the canal together should transfix the sac (Fig. 4), passing immediately behind its anterior wall,

FIG. 4.



Showing sutures for approximating the sides of the canal piercing anterior wall of sac, and left loose until after the sac has been invaginated.

but in front of the invagination suture. This is best done before the open end of the sac is closed, in order that the finger may be introduced and used as a guide to the needle as it crosses the interior of the sac, and also to protect any bowel which may by chance be forced down—e.g., by coughing. The sutures which transfix the sac are left loose until the invagination has been completed, and then tightened up, bringing the sides of the canal together, and at the same time fixing the anterior wall of the sac across the abdominal aspect of the internal ring. This operation, although rather complicated for description, is perfectly simple in practice, and provides the essentials for the radical cure—i.e., (1) a barrier across the abdominal orifice of the canal, and (2) the complete obliteration of the hernial fossa in the peritoneum by the dragging up of the posterior wall of the sac, which brings an entirely new surface of peritoneum into relation with the internal ring. It is important to note that the barrier across the ring is composed of two layers of peritoneum, placed with their serous surfaces in contact, resulting in speedy adhesion and matting together of the parts, which thus afford a much stronger barrier than would appear likely at first sight. Moreover, in consequence of the rapidity with which this adhesion occurs, the parts are much earlier in a condition to bear pressure than is the case where the consolidation depends upon the relatively tardy union of connective tissue, as is the case in some of the other recognised operations for the radical cure.

It is also clear that by this method no projecting mass is left over the internal ring, as the small lump formed by the fundus of the invaginated part of the sac is, if properly arranged, well away from the orifice of the canal. The only point in the details of the proceeding which presents any difficulty is that which is common to all of these operations—viz., the separation of the sac from the constituents of the cord in cases of congenital hernia. Very rarely this may be hardly practicable with a due regard to the safety of the cord, and if this should be the case it is better to leave a strip of the sac attached to the cord. If, however, the attempt at isolation be confined to the upper part of the sac, it is quite exceptional for any serious difficulty to arise, for it is a good practical point to bear in mind that the nearer the sac approaches the abdominal cavity the less intimate becomes its connexion with the cord. Hence, I never attempt to separate the cord from the sac at any other point than just outside the external abdominal ring, leaving the lower part entirely undisturbed. The isolation or removal of the lower part of the sac is always unnecessary, frequently impracticable, and, if persisted in, may endanger the integrity of the testicle, whilst it certainly prolongs the operation.

In *femoral hernia* the sac and lower abdominal aponeuroses are exposed by a vertical incision. The invagination suture passes through the aponeuroses a suitable distance above Poupart's ligament, well away from the upper margin of the femoral ring, and, due allowance being made for the difference in anatomical relations, the details are, step by step, the same as in the case of inguinal hernia. The operation is, however, more simple, as there is none of the difficulty in isolating the sac which often occurs in the inguinal cases. The only point requiring very careful management is the transfixion of the abdominal wall by the needle, in consequence of the possibility of wounding one of the larger bloodvessels—e g, the epigastric or obturator—notorious for their tendency to abnormality. There should be no real risk in this matter, as the parts of the vessels concerned lie immediately beneath the peritoneum, and their pulsations can be so easily felt by the finger which passes through the neck of the sac that very ordinary care will suffice to avoid injuring them. Under no circumstance is it desirable to attempt to close the crural canal or to attach by suture any part of the sac across the femoral ring.

In *umbilical hernia* the invagination of the sac affords no special advantage, whilst in some cases it may be distinctly objectionable and in others impossible. A sufficiently good result in this class of hernia is generally obtainable by cutting away the whole sac and bringing together the margin of the ring as in a wound after abdominal section, aided in some instances by the modification to be presently described.

My first experience of the method described was in a case of strangulated inguinal hernia about two years ago, but so far as any published record is concerned Mr. Stanmore Bishop was the first, I believe, to call attention to radical cure by the complete invagination of the sac by an open operation in THE LANCET of March 31st, 1890, where he describes an excellent method, in which the sac is turned completely inside out and fixed across the month of the inguinal canal by means of a purse-string-like arrangement of sutures, in such a way that the wrinkling up of the sac produces a "boss exactly over the internal ring." The main advantages claimed for this operation were the rapid and firm consolidation which resulted from the apposition of the serous surfaces and the production of the boss just mentioned. It will be evident at once that my modification is identical in principle with Mr. Bishop's, but in detail there is a difference which, although at first sight trivial, is, in my opinion, important. The difference I refer to lies in the fact that, whereas one of Mr. Bishop's great objects is to provide this boss over the internal ring, mine is to avoid doing this by attaching the fundus of the invaginated sac well away from the ring, in order to have a perfectly smooth peritoneal surface over the abdominal end of the canal, thus producing, in fact, as nearly as possible the condition of affairs which exists in a subject who has never been ruptured at all. This, I venture to think, is better than leaving anything like a rounded lump over the internal ring, for however this projecting mass may be arranged, it must necessarily under certain circumstances of pressure tend to act as a wedge, especially if the apposition of the sides of the inguinal canal be imperfect. I therefore believe that the barrier formed in my plan by attaching the anterior wall of the sac across the ring is preferable to the boss produced in the other operation.

(To be concluded.

CHOLERA IN EGYPT.[1]

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HISTORY.

CHOLERA first appeared in Egypt in 1831, being conveyed by bands of pilgrims, and passing over some mild recurrences of the disease, we find that the next serious epidemic took place in 1848, originating at Tantah fair, where pilgrims had assembled in large numbers, swelling the crowd to 195,000. In 1850, 1855, and 1865 it was again brought by returning pilgrims, and in 1866 there was a small after-epidemic, which was not officially recognised. Egypt was then free of cholera till the well-remembered epidemic of 1883. A short history of that visitation will, I hope, be published in the Transactions of this Congress.

CAUSES OF THE 1883 EPIDEMIC.

The cause of this outbreak is, and always will be, involved in some mystery. The two theories started at the time and debated with some heat were—(1) that it was directly introduced from Bombay, and (2) that cholera had been endemic in Egypt since 1865. Now Bombay had been for some months rather more free than usual from cholera, and it became necessary to try to prove that one or more individuals had imported the disease direct from Bombay to Damietta. The first suspected was a fireman. It is a little doubtful if cholera did not precede his arrival at Damietta; but even supposing he reached it before the explosion, it was quite certain that he did not come from an infected ship, that his own disease was alcoholism and not cholera, and that the Damietta men whom he was supposed to have infected only became cholera stricken eight or nine days afterwards, when the daily deaths of the town had already reached 101. The second case brought forward was as deficient in proof as the first, and was temperately and ably handled by Dr. Simpson, who spent four days at Damietta for this special purpose.[2] A woman named Zendaia was accused of having brought the disease from Port Said to Damietta, but on investigation it was proved that she became infected at Damietta, and was one of those who conveyed it to Port Said, where she was taken ill on June 27th or 28th. Cholera has never been traced in Egypt as having been directly brought by ship from India, though there are now steamers which make the voyage in ten or eleven days.[3]

The endemic theory cannot be dismissed in so few words. Sir Guyer Hunter reached Egypt on July 26th, and on Aug. 19th, after an inspection of Cairo and three days spent among the provincial towns, he entertained "grave suspicions of cholera having been endemic in Egypt since the epidemic of 1865."[4] His further researches tended to confirm his suspicions, and before discussing the theory it may be noted that of all the scientists and doctors then busily studying the question only three or four, all unacquainted with Egypt, agreed with him. His chief disciple, Dr. Dutrieux, had some reputation as an African traveller, a writer, and an oculist, but none as a medical observer. He published the theory that typhus fever had been able to produce enteric fever, bilious typhus, walking typhus, and spotted typhus, and that cholera was the next link in the metamorphosis. Sir Guyer Hunter gave two reasons for his belief that cholera in Egypt was endemic: the great annual prevalence of diarrhœa and the recurrence from time to time of cases loosely called "cholerine," "cholera nostras," &c. Together with all other observers, he points out that the diarrhœa which immediately preceded June, 1883, may have been due to contamination of water by carcases, or to the large amount of diseased meat which was eaten by the poorer natives, consequent on cattle plague. But in most years there has been no murrain among the herds, and therefore some other cause must be found. If statistics are studied, it is found that the chief diarrhœa death-rate of Egypt is in children under five years of age, and in the summer months.

The monthly mortality after the age of five years does not vary much during the year—it is always high; and we may go a step further, for even in children between the ages of one and five years there is no very great difference between the summer and winter months. But directly we come to the case of native children under one year we see a startling difference. The death-rate is chiefly from diarrhœa, and occurs not only at the hottest time of the year, when infants drink water in addition to their mother's milk, but it must be noted that the highest mortality corresponds with the season of lowest subsoil water, and the beginning of its rise. The Egyptian does everything he can to pollute his water-supply, and makes no rational attempt to dispose of his sewage; the consequence is, dysentery, enteritis, and whole families of entozoa are endemic in Egypt, but this is not a proof that cholera is endemic. As an extraordinary fact, perhaps due to some racial immunity, enteric fever is very rare among the native population, though common enough among Europeans.

It may easily be conceded that the so-called "cholerine" and "cholera nostras" have no clinical dissimilarity to cholera, and that all cases covered by such unsatisfactory terms would be considered true cholera during an epidemic. As against this, it must be remembered that during an epidemic many cases of simple diarrhœa are covered by the name of cholera. It may be that bacteriology will discover to us the difference between true cholera and the apparently sporadic cases which occur dissociated from all endemic and epidemic trace of the disease. The practical difference between true cholera and the doubtful cases is that the latter can be produced by poisonous food and fruit, are nearly always isolated, are by no means very fatal, and have no tendency to spread, apparently lacking the special exotic germ (whatever it may be) which is one of the necessary elements of epidemic cholera. Sir G. Hunter cross-examined several doctors as to the existence of any kind of cholera in Egypt. Nine of them searched their memories and their note-books, and told him of sixteen cases of cholerine which had occurred in the practices of themselves and their friends between the years 1867–1882. There were two other cases transported from Italy and many recollections of the years 1865–66, when cholera was present in Egypt. It is significant that of these sixteen cases *no less than thirteen recovered;* while an Italian and a Greek lady died, and also a man after eating pickles. It is upon these sixteen cases in sixteen years that the endemic theory is founded. Similar cases occur every year in Europe, as Sir Guyer Hunter himself confesses (p. 41), and at least two or three cases caused some excitement in London at the end of August, 1890.

There is, of course, a tendency in all countries to suppress or modify the diagnosis "cholera" in death returns if it is believed any unreasoning panic might result from its mention; but in Egypt there were considerably more than 100 European doctors unconnected in any way with the Government, and it can hardly be supposed that they had entered into a league to suppress the existence of cholera if it really existed in the country. Moreover, as many of them had served through the previous epidemics, it cannot be maintained that they were not conversant with the disease. So far as I know, there was nothing in 1883 to justify the opinion that cholera was endemic, and, though I have paid some attention to the subject for eight years, I know of no arguments which have occurred in its favour since.

The epidemics of 1848 and 1865 were each followed by a postscript outbreak in the succeeding year, and I fully believed that in 1884 we should have another manifestation in Egypt. In February, 1884, I was appointed to the head of the Sanitary Department of Egypt, and carefully looked out for all cases and all rumours of suspicious sickness. I was rewarded by hearing of the following cases, which I published at the time.[5] At the end of April, 1844, three suspicious cases, not fatal, had occurred among English soldiers at Cairo. During May four other cases were seen by four European doctors, none fatal. In June an outbreak of diarrhœa and vomiting was reported to me from Damietta; this was due to salted drinking water, and it is certain that no one died there from cholera. In July one case, not fatal, certified as cholera nostras, occurred at Alexandria and was seen by many doctors. The only other case which could be heard of that summer was on board a French steamer, which had just come from Marseilles, then cholera-ridden. There

[1] Abstract of a paper read before the Preventive Medicine Section of the Hygiene Congress, Aug. 14th, 1891.

[2] Blue Book (Commercial), No. 22, 1884, p. 30.

[3] See paper read by Dr. Koch at the Berlin Conference in July, 1884. Erforschung der Cholera, Berlin, 1887.

[4] Blue Book (Commercial), No. 33, 1883, p. 1.

[5] St. Thomas's Hospital Reports, vol. xiii., p. 357.

may have been two or three similar cases every summer, but I know of no others until 1886, when two cases occurred in Alexandria—a Dane, who recovered, and in whose motions the comma bacillus could not be found; and another who was poisoned by sausages, but not fatally. In 1887 I saw a fatal case, after eating melon, which has not been reported. The only other case that I know of was an English soldier, in the spring of 1889, who had very suspicious symptoms, but recovered.

But there is another theory with regard to cholera in Egypt in 1883 which is at least deserving of mention, though overlooked at the time. Dr. Simpson suggested that it might have been imported from Mecca, though he was then unaware that cholera existed there. We now know that in 1882, about October 21st, at the commencement of the Bairam *fête*, cholera broke out at Mecca, and cases quickly followed at Mina, Medinah and its environs, Jeddah, and along the caravan routes. Officially there were more than 600 deaths, and Dr. Mahè believes that this number should be doubled. The Egyptian pilgrims underwent ten to fifteen days' quarantine, and reached Egypt in December, 1882, and later. Is it possible that any of them can have brought cholera germs with them in their bodies or their clothing? We must remember that the cholera explosion of June, 1883, at Damietta, was preceded for about three months by great epidemic diarrhœa. To suppose that they can have been in any way responsible for the outbreak at Damietta, we must argue that the poison lay dormant for two or three months till the diarrhœa epoch, and finally, when the summer heat was greatest, the drinking-supply at its worst possible, the subsoil water at its lowest, and when a large concourse of men had gathered at Damietta, it was then recognised as cholera in a town which richly deserved its fate. I do not wish now to commit myself to this theory, but it has sometimes surprised me that it has never been discussed.

CONDITION OF DAMIETTA.

In spite of the belief in the necessity of an exotic germ for the production of a cholera epidemic, there can be no doubt that Damietta in 1883 possessed all the known requisites for engendering filth disease. In addition to the predisposing causes common to the rest of Egypt—a flat, alluvial soil, soaked with decomposing organic poisons, drinking water soiled by every imaginable means, heated stagnant air, an apathetic population, and a poverty-stricken, indifferent Government,—Damietta had at least five other dangers, which affected chiefly the natives of the most crowded and insanitary part of the town. The richer inhabitants drew their water-supply from cisterns filled from the Nile at its height, but the poor folk living in the quarter of the town where cholera was first seen and was most rife were entirely dependent for drinking water upon a low Nile for several weeks below sea level, and therefore extremely brackish, or upon an open canal drain which ran through the town and received the sewage of houses on its banks, and also of the public latrines attached to many of the sixty mosques in the town. These conditions prevailed every May and June, but in 1883 must be added the wholesale contamination of the Nile by carcases of cattle which died of bovine typhus. One Englishman says that he removed during two months more than 2000 carcases in every stage of putrefaction, the greater number being from the Damietta branch of the Nile.[6] The air of the town was in a very poisonous state, and was not improved by the depôts of stinking salted fish (*fisikh*) arriving from the neighbouring lake of Menzalleh for the consumption of Damietta and the rest of Egypt. The last of the exciting causes special to Damietta was the fair which immediately preceded the cholera explosion (June 13th—20th). Some 15,000 people had been allowed without any sanitary supervision to encamp on the outskirts of the town and to overcrowd the existing 30,000 inhabitants.[7] The wonder is, not that cholera appeared, but that any remained alive to debate its origin. After 1883 Egypt enjoyed a respite from cholera and the fears of that scourge till 1890 and 1891, when she found herself seriously menaced by two near neighbours, the Southern Hedjaz and Northern Syria, of which the former is by far the more important question.

CHOLERA AT MECCA IN 1890.

On July 28th, the second day of the *fête*, cholera once more broke out in the village of Mina, and it is satisfactory to know that the news reached Alexandria and Constantinople the following day. The earliest victims were from among the soldiers of Jeddah garrison and Turkish sailors who were encamped near caravans which had already had a high death-rate. It is believed that the poison was carried from caravans from the Persian Gulf, which is only seventeen days from Mecca. Since, August, 1889 the enemy had been lurking about Mesopotamia, and in May, 1890, had attacked Mosul, Van, and Diarbekir. From Mina it lost no time in spreading to Mecca, Jeddah, Medina, Yambo (August 31st), to Massowah in September. Excessive heat and southerly simoon winds prevailed during the summer months, while heavy rain unfortunately fell on the day of Arafat, July 26 h. One hour after the first case was heard of there were three others; after another hour thirteen deaths; and the following day, when everyone was hurrying back to Mecca, many dead were lying by the roadside.[8]

At Mina there was a complete absence of drugs, disinfectant, hospitals, &c., and from a private account I learn that doctors were urgently wanted at Jeddah, for the greatest unpreparedness was everywhere present. The pilgrims disembarking at Jeddah for the pilgrimage were 39,429, and at Yambo 4067, and there are said to have been 20,000 from the Persian Gulf. In the absence of reliable statistics we must suppose that the numbers were, as usual, between 80,000 and 100,000. The official death-rate from cholera at Jeddah was 135 out of 12,000 pilgrims, who had hurried there on Aug. 4th; then it fell to 76 and 79 on Aug. 10th and 11th, on which days it was still 108 and 117 at Mecca. "The death-rate was put down as 400–500 per day, but it is firmly believed in Jeddah that the total mortality in the Hedjaz during about three weeks was 25,000 to 30,000, numbers of whom died from starvation."[9] An enormous number of pauper pilgrims furnished ready fuel for the epidemic, for they lay about the streets eating and drinking any filth that came to hand. The Egyptian Government might perhaps rather more energetically prevent their share of paupers from leaving on the pilgrimage, and as many of the Hajis elect to spend the month of Ramadam in the Holy Places, it might be well to send the medical officer detailed by the Alexandria Quarantine Board some three months earlier than is the custom. In 1890 their doctor reached Mecca on July 24th, only four days before the epidemic was reported. If one might dare to give advice to the board it would be to send an older and more experienced man to the Hedjaz, who would perhaps be able to induce the Turkish authorities to consider sanitary questions. Turkey is quite certain not to introduce any satisfactory reforms unless pressure is put upon her by Europe.

At Jeddah (22,000 inhabitants) Turkey provides six doctors, one of whom draws as much as £720 a year. At Mecca there is an inspector at £600, besides ten other doctors and a budget of £4000 for sanitary measures. Mecca (110,000 inhabitants) is of course extremely crowded during the season, so that £3 or £4 are paid for one night's lodging, and thirty people crowd in one small room to divide the expense. The houses are provided with cesspools which are seldom or never emptied, and the latrines are too inodorous for use. The drinking supply comes from the Ain Zebeida, and runs into an open reservoir of about 100 yards diameter. I am assured that the water smells, that the reservoir is never cleaned out, and that it is unprotected, so that people can throw in whatever they wish. All accounts agree that this water is contaminated by neighbouring cesspools like the holy Zem-Zem water. Mecca itself stands in a winding valley shut in by rocky hills, which reverberate the fierce summer heat. Most pilgrims, imitating Mahommed's own practice, make their exhausting running ceremony seven times between the hills before the sacred rites, and on the same day a jostling, fanatical mass penetrates the stagnant air of the Kaaba. Then on the first day everyone goes through Mina (three miles) to Mount Arafat, twelve miles from Mecca. The mountain is well supplied with spring water from the rock, and is about 200 feet nigh, with a base of one mile circumference. On the second day there are prayers at daybreak and preparation for the "Sermon of the Standing" on Arafat, which lasts from the three hours which precede sunset. The newly formed Hagag, almost naked, exhausted with fatigue, fasting, and emotion, then hurry towards Mina in reckless and chaotic confusion, which lasts most of the

[6] Warm Corners in Egypt, London, 1886, p. 200.
[7] Le Choléra de Damietta, par Dr. Chaffy Bey, Alexandria. L'Epidémique Cholérique de 1883, par Dr. Dacorogna Bey, 1884.
[8] Reports of Dr. Ardouin Bey and Dr. Obeid, Alexandria, 1891.
[9] Report on the Haj., 1890.

night. The third day is ushered in by prayers at dawn, and then, while some continue an orthodox but headlong flight to Mecca, others crowd dangerously in a seething mass in a narrow pass to stone the devil's pillars. Then comes the sacrifice, mostly of sheep, with a few oxen and camels, and the land begins to smell worse than any slaughter-house. Burton thought that less than 6000 sheep were sacrificed; other writers, perhaps less accurate, have put the number very much higher. Mina village, where this takes place, is shut in by hills all round, and as no conservancy arrangements are provided for the pilgrims, and no heed is given to the remains of the slaughtered animals, it is not wonderful that the air becomes impossibly pestilential—quite preventing sleep at night. Some try to protect themselves by stuffing their noses with cotton wool, but all suffer from the heat, stench, blood-soaked earth, flies, kites, and vultures. The water at Mina comes from the Ain Zebeida in Mecca and is kept in big cisterns, which are said never to be cleaned out, and therefore contain many entozoa. Many pilgrims fly at once to Mecca to escape these horrors immediately after the sacrifices, but there are others detained there by religious scruples or other reasons during all "the three days of drying flesh."[10] This condition of things is quite enough to produce any pest, besides cholera, and there is said to be always a great diarrhœa mortality among the pilgrims. On the day of Arafat alone there were, in 1888, twenty-three official deaths; in 1889, seventeen deaths; and in 1890, thirteen deaths. Immediately after the Holy Week religion enjoins on the faithful an immediate dispersion from Mecca, which makes it easy for any existing disease to be diffused at the same time. Many proceed to Medinah, but even on the desert route they are exposed to additional danger from the Bedouins. In 1886 about seventy pilgrims were killed or seriously injured on the first day of this journey, mostly by camel drivers.

The Quarantine Board, though not quite prepared for the reception and treatment of the returning pilgrims, took energetic measures during August and September to deal with the question, and it is perhaps due to their exertions that cholera did not reach Egypt. At El Tor all were subjected to twenty days' observation after the last case of cholera in the camp, and Egyptian pilgrims were subjected again to three days' quarantine and disinfection at a station fifty miles from Suez, Ras Mallap. Some of the longest cases were kept in camp for as much as fifty-one days. Some 10,121 were landed at El Tor, of whom 422 died between Aug. 11th and Nov. 20th. The deaths included 135 from cholera, nearly all being Turks and Syrians, 123 from marasmus, and forty-one from dysentery. One soldier, forming part of the sanitary cordon, also died from cholera. The 5106 Egyptian pilgrims only had thirty-one deaths among them—viz., one from cholera, nine from marasmus, thirteen from dysentery, and eight from other diseases. About 200 of the Egyptians died from cholera in the Hedjaz. The Egyptian Government formed a special commission in Cairo, which had its first sitting on August 6th, and issued some very useful instructions. The Tantah fair was postponed, the small streets of Cairo were kept clean, and the provincial towns were made cleaner than they had ever been seen before. Unfortunately this was but a spurt, and no permanent improvements in public health have been recorded during the following twelve months.

(To be concluded.)

[10] This account is taken partly from Burton's personal narrative of 1853 and partly from the accounts of Egyptian friends who made the pilgrimage in 1890.

CUCKFIELD UNION INFIRMARY.—The new infirmary in connexion with the Union Workhouse at Cuckfield was opened yesterday for the use of patients, a special service being arranged for the occasion. This addition to the buildings at the big house at Cuckfield is connected with the main part of the building by a light corridor, on the left of which is a new kitchen fitted with every provision for cooking, besides apparatus for heating the water supplied in various parts of the infirmary. The additional ward accommodation in the old infirmary will allow of some fourteen more beds, and, the male patients being removed, it will be wholly available for the accommodation of the female invalids. A small isolated infectious hospital has also been built.

A METHOD OF ACCELERATING DESQUAMATION, AND THEREFORE OF SHORTENING THE INFECTIVE PERIOD, IN SCARLET FEVER.

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WHATEVER influence the early throat symptoms may exert in communicating scarlet fever, it is universally admitted that the main danger of imparting the disease to others depends on the diffusion of the desquamating flakes which separate from the surface of the body during convalescence. Some years since I advocated that our efforts to limit the spread of scarlet fever should be directed to systematic disinfection of the skin, prior to, during, and till the absolute completion of desquamation. For this purpose mild measures of disinfection, repeated at frequent intervals throughout, are much more certain and satisfactory than stronger ones employed solely towards the close of the process of skinning, or just before permitting a return to free intercourse and association with all and sundry. Carbolic acid in the proportion of 3 per cent., in ointment or oil, constitutes the most reliable agent. With this, however, should be combined daily ablution with soap and warm water, so as to remove as rapidly and as completely as possible the dry epidermic particles as soon as these become loose, the carbolised oil or ointment being rubbed on the surface after it is dried. Further experience has convinced me more firmly of the truth of these principles. Such measures alone render isolation, where that can be carried out, effectual; even without isolation, when such cannot be obtained, they reduce to a minimum the risk of infecting others. While this method, therefore, affords the maximum of protection, it occurred to me that it might be possible safely to accelerate desquamation itself, so as to lessen the period during which infection is likely to take place. Various modes of attaining this end were tried in succession, and were rejected as unsatisfactory; but eventually a plan was discovered which is at once simple and effectual, and which so far has not been proved to have any disadvantages. The action of resorcin in causing the outer layers of the epidermis to separate without injury to the deeper ones is now well known, and has been made use of in the treatment of ichthyosis and of acne. Rubbed on as an ointment, it did not produce the desired effect in scarlet fever. A resorcin soap, indeed, would have amply fulfilled the indications, but on inquiry it was found that there were chemical difficulties in the way of manufacturing such. When resorcin was incorporated with ordinary hard or soft soap, a molecular change took place in the drug, its constituents broke up and formed new combinations; in fact, it was no longer a resorcin soap. But in process of time, by a simple procedure, Eichhoff succeeded in obtaining a stable resorcin soap. He found that when a soap was made chemically acid by the addition of salicylic acid, a moderate amount of resorcin quite sufficient for our purpose could be combined with it. A 3 per cent. resorcin salicylic superfatted soap is now prepared by Beiersdorf of Hamburg and by Muhlens of Cologne. When this soap is used to wash cases of scarlet fever, warm water being always employed from the commencement to the close of desquamation, a notable diminution of the period occupied by "peeling" is observed.

From the consideration of a large number of unselected cases the conclusion has been arrived at that, while the commencement of desquamation may be as early as the fourth day of the disease, or may in exceptional instances be delayed as late even as the sixteenth, the average day on which it is first visible is the ninth. Again, I determined that from the onset of the disease till the completion of desquamation in sixty-two unselected cases the average was 55·5 days, no treatment having been employed to interfere with the natural process. But when washing with the resorcin salicylic soap was begun as soon as signs of desquamation could be noticed, or shortly before, the desquamation was entirely completed in 40·26 days. There is thus a gain on the average of more than a fortnight. In two cases washing with the soap was practised on only one side

of the body, a commencement being made in one three, in the other four, days prior to the appearance of any trace of scaling. In the case in which the right side was washed, peeling began on the right palm, and then subsequently on the right side of the trunk and limbs; in that in which the left side was so treated, the left palm, then the left side of the trunk and limbs, showed the earliest indications of desquamation. In all cases it was found advantageous, after washing with the soap and drying the body to smear on a small quantity of some bland oil, such as olive, almond, or purified whale oil. The nurses, too, found it necessary to protect their hands with indiarubber gloves, or to use a sponge carefully in washing the patients, else their palms became tender from a thinning of the epidermis. Such of the patients also who were old enough, or far enough advanced in convalescence to wash themselves, noticed that the hand used in washing desquamated earlier than the other. The benefits to be gained from such a procedure are too obvious to need being more fully insisted on. One point only may be mentioned: that whereas on the average a patient in ordinary circumstances must remain a species of social pariah till the end of two months, when desquamation may be presumed to be finished; if washing with the resorcin salicylic soap be steadily carried out in the manner suggested, he may safely be dismissed from hospital, or permitted to associate with his friends at the termination of six weeks. It only remains to be added that all these observations were carried out under the supervision of Dr. Wood, the experienced medical superintendent of the City Hospital, with the assistance of Mr. Clark and Dr. Rubidge.

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JAUNDICE IN CHILDREN ACCOMPANIED BY TEMPORARY ENLARGEMENT OF THE LIVER.

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ENLARGEMENT of the liver is not generally regarded as of common occurrence in cases of simple jaundice, and in many of the text-books either no reference is made to its existence or it is expressly stated that such enlargement is the exception. Thus in "Fagge's Principles of Medicine," vol. ii., p. 262, it is stated that "at no period of the complaint can one generally make out that the liver is enlarged, either by palpation or by percussion." On the other hand, in the works of Eustace Smith, Henoch, Ashby, and Wright, the fact of enlargement of the liver being frequently present in the simple jaundice of children is mentioned. The following cases are therefore of some interest, as showing a condition of liver which in all probability is of more common occurrence in cases of simple jaundice than has been generally recognised. In all the cases there was every reason to believe that the diagnosis of simple, or as some would perhaps prefer to call it, catarrhal jaundice was correct.

CASE 1.—Horace C——, aged six; Nov. 3rd, 1888. A week before coming to hospital the child complained of pain in the chest, and was constantly vomiting. These symptoms continued for three or four days. His abdomen was noticed to be enlarged, and three days before being brought to hospital jaundice was observed. There was no history of congenital syphilis or of alcoholism. On examination he was found to be a fairly nourished child with capillary stigmata on the cheeks, yellow conjunctivæ and the skin of a yellowish tinge. Both heart sounds were reduplicated; lungs normal. The free edge of the liver was felt 2⅛ in. below the costal margin in the nipple line; it was thin and hard, the surface was finely granular to the touch, in all probabilty due to the presence of granules of subcutaneous fat. The liver dulness commenced at the fifth rib in the nipple line. The urine was of sp. gr. 1012, high colour, containing bile pigment, but no albumen. The fæces were pale, but not quite devoid of bile. The jaundice gradually disappeared, and by the 17th had entirely faded. The liver was still enlarged and the pulse from 60 to 80. On Dec. 25th the liver could just be felt below the costal margin. The motions were of normal colour. On Jan. 16th, 1889, the liver was felt three-quarters of an inch below the costal margin, and on the 20th, the day of discharge, it did not extend more than half an inch in the same direction. At the time of discharge he was in all respects well.

CASE 2.—Edith S——, aged four. The patient was brought to the hospital on March 14th on account of retching, having been quite well previously. The retching commenced at 3 A.M., and was ascribed to a piece of cake she had eaten. It lasted only five minutes. On the morning of the 15th the mother noticed the yellow tinge. On examination it was found that the ocular conjunctiva was bile-stained and the skin sallow. The pulse was 120. Heart and lungs normal. The liver was felt in the nipple line 1½ in. below the costal margin, the free edge being sharp and hard, the surface of the liver smooth. There was no splenic enlargement. The child had a rachitic history. She did not attend again, so the inference is that she recovered.

CASE 3.—Augustine T——, aged five; Sept. 23rd, 1889. The child was brought for jaundice and diarrhœa, which came on ten days previously, without pain or discomfort. On examination he was a well-nourished boy, with distinct and general jaundice. Pulse 112. Heart and lungs normal. The edge of the liver, rather rounded and not sharp, was felt exactly 1½ in. below the costal margin. The dulness on percussion commenced at the fifth rib in the nipple line, and was absolute at the sixth. On Oct. 7th the free edge of the liver was exactly 2 in. below the costal margin in the nipple line, and was quite sharp. On the 21st the liver edge was 2½ in. below the costal margin; the jaundice was less marked. On Nov. 25th the condition of the liver was the same. The boy was apparently well, and did not attend again.

CASE 4.—John L——, aged eighteen months; Oct. 26th, 1886. A month before attending hospital the child had diarrhœa and vomiting, the motions being of a natural colour. A week later he became suddenly jaundiced; this had continued since, and become more marked. In the two or three days preceding attendance he had been sick. On examination he was fairly well nourished, slightly rickety, and extremely jaundiced. Heart and lungs normal. The edge of the liver was felt two inches below the costal margin; it was very hard to the touch; there were no irregularities on the surface. The dulness on percussion commenced at the sixth rib. On Nov. 8th the liver appeared to be a trifle larger, reaching below the level of the umbilicus in the nipple line, the edges being very sharp and easily felt. There was no tenderness. The further notes in this case do not refer to the condition of the liver.

CASE 5.—John L——, aged seven; April 10th, 1890. The patient was brought to hospital on account of headache during the preceding fourteen days. The mother had noticed a yellow tinge of skin for the same time. On examination he was a well-nourished boy, with general jaundice. The free edge of the liver was felt 1¾ in. below the costal margin in the nipple line, the edge being firm and sharp. The dulness on percussion began at the sixth rib. On April 17th the condition of the liver was unaltered. On the 24th the jaundice was passing off. The liver was now felt not quite a finger's breadth below the costal margin in the nipple line, and had lost the feeling of hardness previously noticed. On May 13th the size of the liver was normal and the child well in all respects.

CASE 6.—Sophia W——, aged ten months; Oct. 10th, 1889. The child was brought for pain in the abdomen and sickness. She had been badly fed, having bread in addition to being suckled at all hours. The abdomen was swollen; there were no other physical signs. On Oct. 14th the child was brought suffering from jaundice. The liver dulness extended nearly to the umbilicus. On the 24th the edge of the liver could be felt 2¾ in. below the costal margin in the nipple line. On Oct. 28th the jaundice was less marked, and by Nov. 3rd had quite disappeared.

It is unnecessary to give in detail the remaining six cases. They were all of the same kind; jaundice appearing in previously healthy children, lasting for some weeks, and then, as far as could be ascertained, passing off, and in all physical examination of the liver revealing enlargement of the organ more or less marked. In only a few of the cases had the enlargement entirely disappeared at the time the patient was lost sight of.

In Case 2 the child was markedly rickety, and of course it might be urged that this condition would account for the

increased size of the liver. But in the enlargement occurring in rickets there is not the hardness of touch which is found in cases of extreme distension of the liver capsule. In Case 3 marked increase of size of the liver took place under observation. The edge was felt 1½ in. below the costal margin on Sept. 23rd, and gradually descended until, on Oct. 31st, it measured 2½ in. below the ribs. These cases throw no light on the causation of the jaundice, but it may be noted that in four out of the six reported *in extenso* the affection was ushered in with vomiting and other symptoms of gastric disturbance, so that it is possible that a catarrhal process originating in the gastric mucous membrane may have travelled along the bile-duct. Neither is it apparent why in such cases as these the liver should be enlarged. But they clearly show that enlargement of the liver—well marked though temporary—does occur in cases of this little understood malady, simple jaundice.

REMARKS ON THE PATHOGENY OF CANCER, WITH SPECIAL REFERENCE TO THE MICROBE THEORY.

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THE term "cancer," after having in the past undergone repeated changes of meaning, is now used in such different senses that it is necessary for those who employ it to state precisely what they mean by it. In the popular sense every malignant neoplasm is a cancer. In medical science, however, the term is usually restricted to certain malignant neoplasms, which, as Waldeyer[1] and others have shown, are of *epithelial* origin. This is the sense in which I employ it. At the present time one of the most absorbing pathological controversies that has ever arisen centres round the pathogeny of cancer.

Briefly stated, the question is: Does this disease arise, as Johannas Müller maintained, through a modification of the formative process; or is it an outcome of the inflammatory process, due to the presence of micro-organisms? For my own part, I incline to the former alternative; and I think the future will see decided reaction in this direction. As I have fully set forth my views on this subject elsewhere,[2] I need only briefly allude to them here. In the genesis of cancer I believe we have to do with the formation of a new, more or less insubordinate, centre of development. The essence of the process is that certain of the epithelial cells of the part grow and multiply more rapidly than their congeners. The rejuvenescence I regard as dependent upon failure of the integrative force, which normally restrains their activities within proper limits. Thus cancers arise by a kind of abnormal gemmation, which is but a modified superinduced repetition of the normal developmental process. It follows from this that the genesis of cancer is a phenomenon of the same order as discontinuous growth in general. Mr. Mitchell's[3] conception of the disease as arising by what he calls "histogenic dissolution" is, I think, fundamentally similar to mine.

Before setting aside these views in favour of the microbe theory, I think we ought to have strong evidence as to the probability of the latter hypothesis furnishing as complete an explanation of the phenomena of the disease. Let us see whether this is the case. Perhaps the most striking feature about cancerous growths is the wide morphological differences that obtain between them, according to the localities whence they originate; herein they differ completely from the inflammatory pseudo-plasms, which always have the same indifferent structure, no matter in what part of the body they arise. What, for instance, can be more divergent in this respect than the appearances presented on microscopical examination by sections of cancers from such different parts as the breast, rectum, and skin? We learn from such examinations that cancerous growths are sufficiently organised to present unmistakable morphological resemblance to the organs whence they originate. This power of autonomous growth and development (individuality) is characteristic of all cancers, and upon it their so-called parasitism depends. It is by virtue of this property that cancers tend to persist and increase indefinitely. Nothing in the least degree comparable to this is seen in connexion with any of the inflammatory pseudo-plasms, which soon tend to disappear. The great resemblance always noticeable between primary and secondary cancerous growths is a phenomenon of similar import, which is absolutely unaccountable on the basis of inflammation and micro-organisms. It is impossible to conceive a valid explanation of such conditions, without the presence of epithelial cells, capable of reproducing their like. In short, this phenomenon clearly implies that the disease centres in the epithelial cells themselves. These, then, are strong *a priori* reasons for regarding the microbe theory of cancer as highly improbable.

Now let us turn to the *a posteriori* side of the question. Before a disease can properly be called parasitic, the parasite must be found, isolated, and the disease it is alleged to cause must be reproduced by its inoculation. How far has the hypothetical cancer microbe fulfilled these conditions? Of the numerous researches undertaken of late with a view to finding it all have proved abortive. One after another the alleged discoveries of this recalcitrant organism have ended only in disappointment. Where, now, are the specific cancer microbes of Rappin, Freire, Scheurlen Schill, Francke, Lampàzi-Rubino, Savarelli, Kübasoff, Russell, and others? Scheurlen's[4] cancer bacillus was no sooner announced than it was shown by Senger[5] and others to be nothing but a potato bacillus—one of the several kinds of organisms that grow readily on slices of potato. The "fuchsine bodies" described by Dr. Russell[6] as "the characteristic organism of cancer," and regarded by him as vegetable parasites of the same order as the yeast plant, have since been met with in a great variety of conditions; and they are now generally regarded as nothing but proteid coagula. It seems certain that the attempt now being made to attribute cancer to psorospermosis will end in a similar way.[7]

Of special researches for the cancer microbe that have yielded only negative results the following are the most complete: Shattock and Ballance,[8] Senger,[9] Makara,[10] Bazzole, &c. Hitherto the net result of all this bacteriological pathology has been to demonstrate that, although under certain conditions various kinds of micro-organisms may find a suitable habitat in cancerous growths, yet these have nothing whatever to do with the causation of the disease. In spite of repeated failures, however, the germ pathologists seem now to be more confident than ever that there *must* be a specific cancer microbe.[11] I should like to know why, since we can so well account for all of the phenomena of the disease without it. It appears to me that the agency of micro-organisms is no more necessary to account for the genesis of cancer than it is to account for the genesis of a tooth or a hair. The microbe of cancer has not yet been discovered, because in all probability it does not exist.

The negative results of numerous inoculation experiments point to the same conclusion. Of the many attempts made to transmit cancer experimentally from human beings to the lower animals, and from one species of animal to another, all have ended in failure. The alleged successes of Langenbeck, Follin, Goujon, and others were never rigorously proved. Dupuytren fed dogs and other animals for considerable periods with human cancers, but they did not become infected with the disease. It might be thought that such experiments would have a better chance of success if they were confined to animals of the same species. The attempts made in this direction by Senn, Jeannel, Bert, Köster, Erbre, Doutrelepont, and many others, have, however, all proved abortive. Hanau[12] (rat to rat) and Wehr[13] (dog to dog) now allege that, after numerous failures, they

[1] Die Entwicklung der Carcinome, Arch. f. Path. Anat., Bd. xli., S. 470.
[2] The Principles of Cancer and Tumour Formation, Bale and Sons, London, 1888.
[3] The Philosophy of Tumour Disease, London,
[4] Deutsche Med. Woch., No. 48, 1887, S. 1033.
[5] Berlin. Klin. Woch., No. 10, 1888, S. 185.
[6] Brit. Med. Journal, vol. ii. 1890, p. 1356; vol. i. 1891, p. 112; also p. 568.
[7] Arch. de Méd. Exp., t. ii., 1890, p. 46 and p. 786.
[8] Trans. Path. Soc., Lond., vol. xxxviii., 1887, p. 413.
[9] Berlin. Klin. Woch., No. 18, 1888, S. 185.
[10] Deutsche Med. Woch., 1888.
[11] Brit. Med. Journ., vol. i., 1891, p. 565.
[12] Corresp. Bl. f. Schw. Aerzte, No. 11, 1889, S. 334.
[13] Arch. f. Klin. Chir., Bd. xxxix., 1889, S. 226.

have at length succeeded; but it has been pointed out that their results are probably due to spontaneous outbreaks of the disease, having nothing to do with the inoculations.

In any event I cannot accept their experiments as conclusive evidence of the inoculability of cancer until they have been confirmed by independent investigators. And this is the more requisite as numerous previous experiments of the same kind have ended only in failure. With regard to human beings, there is no proof that cancer has ever been communicated from one individual to another.[14] The attempts made by Alibert and others to inoculate themselves and their pupils with the disease were uniformly unsuccessful. There is not a single case on record of a surgeon having acquired cancer during the performance of operations for its removal, notwithstanding the frequency of exposure to infection under such circumstances. Of the thousands of persons habitually engaged in attendance upon the victims of this disease, how few have ever become similarly affected. Notwithstanding that many men have had sexual intercourse with women affected with uterine cancer, there is not a single well-authenticated case on record of cancer of the penis acquired in this way. In short, there is every reason to believe that cancer is not inoculable, neither is there the faintest proof that a virus in any way comparable to that of tubercle syphilis, or other infectious disease, plays any part in its genesis. Here again the hypothetical cancer microbe fails to make good its entity.

I have found very few experiments on record as to the auto-inoculability of cancer in the lower animals. Senn's attempts on a dog failed.[13] In human beings Hahn[16] claims to have succeeded in transplanting several small grafts of cancerous skin from one side of a woman's chest to healthy skin on the other side. This amounts to the artificial production of metastasis. Senn failed in a similar attempt to transplant a fragment of a cutaneous epithelioma of a man's leg into the connective tissue of the part. The chief evidence as to the auto-inoculability of cancer is, however, derived from clinical observation. This, if not quite conclusive, is certainly weighty. In a considerable number of cases it has been observed that when cancerous growths have remained for some time in contact with apparently healthy epithelial surfaces the latter have at length become cancerous, as if by direct implantation. Mr. Cripps[17] has related the case of a woman in St. Bartholomew's Hospital with extensive cancerous ulceration of the left mammary region, who, being unable to put on any dress, had kept her arm—bent at a right angle—in constant contact with the disease for several months. In consequence of this the skin in the vicinity of the elbow became the seat of a cancerous ulcer several inches in diameter. A somewhat similar case had been previously recorded by De Morgan.[18] He says, "My colleague, Mr. Shaw, attended a woman whose pendulous breast—the seat at its most dependent part of ulcerated cancer—rubbed against the skin of the thorax. At the point of contact a circular patch of cancerous ulceration (the size of a florin) took place, the intervening skin between this and the fold of the mamma remaining healthy." Many facts of similar import have been noticed in various other parts of the body.[19] I have myself seen several instances of the kind, especially in the mouth and bladder, in which it appeared to me almost certain that cancerous growths had originated in this way. Several cases have been recorded which go to show that eroded surfaces may become infected through constant contact with the discharge from cancerous ulcers, and many surgeons believe in the traumatic dissemination of the disease through infection of wounds by the escape of "cancer juice" during operations. In all of the foregoing instances the phenomena met with more closely resemble those of tissue grafting than they do those resulting from the inoculation of infectious disease. It may be inferred that the morbid epithelial cells are themselves the infecting agents, and that cancer auto-inoculability is a phenomenon of the same order as cancer metastasis. The evidence here, as before, is against the existence of a specific cancer microbe.

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[14] For a series of alleged cases to the contrary vide THE LANCET, vol. ii. 1887, pp. 727, 888, 919, 986, 1091, 1145, &c. I regard these simply as highly exceptional coincidences.

[15] Surgical Bacteriology, 1889, p. 267.

[16] Berlin. Klin. Woch., No. 21, 1888, S. 413.

[17] Trans. Path. Soc. Lond., vol. xxxii., 1881, p. 111.

[18] On the Origin of Cancer.

[19] P. Kraske: Uber die Entstellung-sekundärer Krebsgeschwülste durch Impfung. Cent. f. Chir., No. 48, 1884, S. 801.—Klebs: Handb. der Path. Anat., Bd. 1, S. 190.—Bergmann: Berlin Klin. Woch., No. 47, 1887, S. 891.—Kaufmann: Arch. f. Path. Anat., Bd. lxxv., S. 317.

CANCRUM ORIS.

BY E. C. KINGSFORD, L.R.C.P. LOND., M.R.C.S.

IN THE LANCET of May 4th, 1889, in conjunction with Dr. Yates of Bolton, I reported three cases of cancrum oris successfully treated by the local application of corrosive sublimate. A fourth case has come under my notice in which the treatment proved unsuccessful, and I think it but right that this also should be placed on record.

David C——, aged four years, was admitted to the Bolton Infirmary under the care of Mr. G. A. Patrick on Oct. 23rd, 1890, suffering from proptosis of the right eye and intense swelling of the cheek and eyelids on the same side. The history of the case was that the child had been under treatment for three weeks with swelling of the right cheek and ulceration inside the mouth, with very free salivation. The former subsided somewhat after application of poultices, and six or seven days before admission increased again rapidly, the eyelids becoming involved. Teeth were extracted on Oct. 20th and 22nd. The boy was one of a family of three, and, according to his mother's statement, had always enjoyed excellent health; he had not suffered from measles or any debilitating disease, and came from a fairly healthy neighbourhood.

On admission the cheek and eyelids were hard, red, and swollen, and only a very small portion of the cornea, which was hazy, could be seen on separating the latter. Inside the mouth necrosed bone could be felt where the upper molars had been removed, and the breath was extremely fetid. The swelling did not extend down the neck or backwards, nor was there any otorrhœa. The child was not at all depressed, and did not seem to be in pain. Temperature 99°. Chloroform was administered at once and the optic aperture enlarged by snipping through the outer canthus; this allowed of the escape of a small quantity of thin, stinking pus. The eye was prominent, tension greatly increased, and the cornea quite hazy. The alveolar process of the superior maxilla was thoroughly necrosed, and its remains easily removed with dressing forceps. A finger then passed into the antrum came in contact with the eyeball, the floor of the orbit being partly necrosed away. It was now decided, seeing the hopeless appearance of the eye, to remove it, and this having been done, the remainder of the orbital floor was found to be quite bare; the lower orbital rim was then wrenched off with forceps, and a large-sized drainage-tube passed through into and out of the mouth, the two ends being united by a piece of thread. There was very little hæmorrhage during the operation, and the parts were freely dusted with iodoform and dressed with sal-alembroth gauze. The next day the child was quite cheerful and took his milk well, experiencing no difficulty in swallowing. Temperature 102°. Teeth quite clean, the cheek was still very swollen, and the eyelids had not diminished in size.—25th: Child quite lively and talkative, and insists on having his own way. There is a dark gangrenous patch at the outer canthus about the size of a split pea. Temperature 100°.—26th: Gangrene has started in the centre of the lower eyelid; there is copious salivation. The tube was removed, and the orbital cavity well swabbed with perchloride of mercury lotion (1 in 500) containing some glycerine, and lint soaked in the same used as a dressing. The gangrene now extended with frightful rapidity, notwithstanding that the parts were kept constantly soaked with lotion, and that the strength of this was increased to 1 in 250. The patient did not suffer any pain, and permitted the removal of sloughs, swabbing, &c., without resistance. He took his food well, and talked a great deal till Oct. 30th, when he became drowsy and very irritable. Temperature 102°. On Oct. 31st, as the mercury was having no good effect, a lotion of chloride of zinc (eighty grains to the ounce) was used instead. The boy was now more irritable, and refused his food. He died on the evening of Nov. 1st. The whole of the right side of the face had disappeared, the cavity extending from just in front of the ear to beyond the bridge of the nose, and from the upper margin of the orbit to half an inch below the angle of the mouth, the commissure of the lips, however, being left intact; the upper eyelid was represented by a small central tag less than half an inch across. The floor of this cavity opened into the nose and mouth. Most of

the superior maxilla had disappeared, and the inferior was partially exposed.

Remarks.—As this case was not seen till three weeks after the onset of symptoms, it is difficult to determine how it originated—probably as an ulcerative stomatitis, followed by necrosis of the upper jaw, and typical nomatous gangrene. No signs of the latter, however, were apparent till thirty-six hours after the operation. The mercurial treatment had no effect whatever in checking the disease, although in the three other cases in which I have tried it its effect has been most marked within twelve hours. This may be accounted for by the fact that the deeper structures were already thoroughly permeated by the virus, whatever it may be. I doubt if fuming nitric acid could have been adequately used, and am sure that the actual cautery could not in this case, on account of the large surface of bare bone in the original cavity. The case is remarkable in that there had been no previous debilitating disease, and the boy was apparently in very good health. Constitutional symptoms, except rise of temperature, were absent till within thirty-six hours of death, when diarrhœa set in.

The Common, Upper Clapton, N.E.

PREMATURE LABOUR AND DEATH CAUSED BY LACERATION OF THE LIVER.

BY W. J. MACKENZIE, M.D.,
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THE following case is unique, perhaps, in obstetric annals. However that may be, I venture to think it deserves passing notice in the pages of THE LANCET.

On Oct. 15th I received an ordinary parish visiting order to see a girl, L. P——, aged nineteen, and single. By the merest chance I had seen her in her own house two days before, when I called to visit her younger brother, who was convalescent from rheumatism (not acute). She was then sitting on a chair with her clothes on, and presented no appearance worthy of attention. The tenement consisted of two rooms, dark, unwholesome, and unsavoury, such as must constantly be brought under the notice of London parish doctors. On my arrival on the 15th I found my patient lying huddled up in bed, and averse to answering any questions. Continued cross-examination of her and of the woman who had sent for me revealed that twelve hours before she had miscarried, and that the "offspring" (to use the word in its literal sense) had been put down the watercloset. There was no hæmorrhage, but it was easily made out by external examination that the placenta was still in utero. Vaginal examination proved so exquisitely painful, the patient nearly fainting on the introduction of the finger, that I desisted from any forcible attempts to make an exact diagnosis, as the absence of hæmorrhage seemed to prove that there was no pressing danger. I made certain, however, that the os was closed. No further history could then be ascertained, and so, after prescribing twenty drops of the liquid extract of ergot every three hours, and enjoining on the woman who had sent for me the necessity of letting me know if any urgent symptoms developed, I left. I did not take the temperature, but the pulse was 72, full and normal. Nothing, so far, made me expect a disastrous issue to the case, although the extreme pain and urgent symptoms of syncope on examination puzzled me. On the next morning, the 16th, at 8 A.M. (about eighteen hours after first seeing the patient), I was summoned to her by a message that she was dying. On arrival (about 8.30) I found her almost pulseless. No hæmorrhage had occurred, but I was told she had been delirious and tossing herself about in bed all night. The temperature was normal. She had voided urine, which was acid, non-albuminous, and of sp. gr. 1104. Vaginal examination gave her more intense pain than on the former attempt, and accordingly I desisted from torturing her, though the os could still be felt not patent. In addition to her medicine I ordered her some brandy, and engaged a competent nurse. I saw her again at 12.30 and 3 P.M., when she seemed to have revived, and I was surprised to hear in the evening that she had died at 6 o'clock. There was no history of hæmorrhage in the whole case. Of course the facts were told to the coroner, and a post-mortem examination revealed the cause of death. This was a laceration of the posterior margin of the liver, which caused an escape of bile into the upper part of the peritoneal cavity. All the other organs were healthy, except the lungs, which showed traces of old inflammation. The uterus was full of placenta, and judging from the condition of the parts I should think that my patient was between five and six months "gone" in the family way.

The history of the case, elicited at the coroner's inquiry, clearly made out the origin of the injury. On the Saturday night before I was sent for, she had been "romping" with her "young man," by whom it was acknowledged she was *enceinte*, and another female friend. The deceased was sitting on a chair, the back of which was firmly placed against the dresser, and the man threw his companion against her with such violence that she felt a sudden shock, and cried out, "Oh! my back!" She then fainted, was taken home, and, recovering at first, experienced no other symptoms till I was sent for. The cause of the lesion is exactly the same as is described in the surgical books. These state that most cases of ruptured liver are met with in railway men, who are subject to a shock between two opposing carriages, and constituting what is called "a buffer accident." The conditions in this case were similar. The victim was sitting on a chair closely applied to the dresser. Between this dresser and the woman who was thrown against her she received a hepatic laceration, as evinced by her cry and syncope, similar to that which railway men suffer from when they are caught between two carriages.

The interval of time between the reception of the injury and the onset of acute symptoms is the point most worthy of notice. The girl was hurt on Saturday night, and miscarried on Tuesday evening; while I saw her on Monday morning I noticed nothing abnormal. I think that on the receipt of injury she must have ruptured some hepatic fibres to a slight degree. Her spirits bore her over the interval; the onset of premature labour, with its consequent muscular activity and exhaustion, tore the divided fibres further asunder, and death ensued in the way I have already described. The post-mortem examination revealed that nothing I could have done would have saved her. The only interesting elements in my attendance were the absence of hæmorrhage and the presence of extreme pain on attempted examination.

Lastly, I may ask what became of the five or six months' fœtus that was thrown down the watercloset? I have been unable to trace it, though I have had one or two cases presenting "typhoid" symptoms in the same block of buildings. The Infectious Diseases Notification Act was only supposed to be a means to an end. That end, among other things, contemplated the bringing of owners of property into and under the reasonable control of their betters—that is, medical men. The very statement of the question just mentioned raises a field of controversy for others than ourselves to thrash out.

Holloway-road, N.

Clinical Notes:

MEDICAL, SURGICAL, OBSTETRICAL, AND THERAPEUTICAL.

A CASE OF COMPOUND COMMINUTED FRACTURE OF THE SKULL; TREPHINING; RECOVERY.

BY F. W. JOLLYE, M.R.C.S., L.R.C.P.LOND., D.P.H.ENG.

As several instances of successful brain surgery have been recorded in the columns of THE LANCET lately, the following case may be of interest.

H. H——, aged twenty-two years, was admitted into the Warminster Cottage Hospital at 11.15 A.M. on July 15th, 1889, suffering from a fracture of the left half of the frontal bone, which had been caused half an hour previously by the end of a plank, which he was holding to be cut by a steam saw, suddenly jerking up and hitting him on the forehead. On admission he was totally unconscious, breathing stertorously, with arms and legs rigid and a pulse of 74. Mr. Hinton gave him methylene, and Mr. Willcox kindly assisted me. The wound, which was covered by brain matter and sawdust, was situated an inch above the left orbit, reaching from an inch and a quarter to the left of the median line horizontally outwards for two inches and a quarter. On introducing the finger, several small fragments

of bone were found loose, and two larger ones firmly wedged down, so that it was necessary to apply a small trephine to the inner side of the wound and remove a disc of bone, after having well irrigated the wound and washed the scalp with 1 in 20 carbolic solution. A triangular piece of bone, measuring one inch at the base and one inch and a quarter from base to apex, was removed, and a similar piece was elevated and its sharp point removed with bone forceps, and after several small spicules had been removed and all the remaining corners rounded off with the bone forceps, the wound was irrigated out with hot 1 in 40 to check the venous oozing, which was considerable. An indiarubber drainage-tube was passed down to the bottom of the cavity in the frontal lobe and brought out of the middle of the wound, the dura mater, which was too ragged to suture, was laid down and well powdered with iodoform; two small drainage-tubes were put in, one at either end of the wound, which was then sutured, powdered with iodoform, and dressed with carbolised gauze and sal alembroth wool, being kept in place by a capelline bandage. After the operation, which lasted one hour and a quarter, his arms and legs were still rigid when the anæsthesia had passed off. He was propped on his left side in bed to facilitate drainage. At 2 P.M. the discharge was through the dressing, and at 8 P.M. the dressings were changed, when there was a good deal of brain matter and blood oozing through the deep tube. The same evening he answered a question rationally. For the next few days he lay coiled up on his left side, being at times very restless and delirious and passing his evacuations in bed, and at other times he would answer when spoken to. On the 17th (third day) the wound was dressed, and it looked very healthy, but there was still a discharge of blood and brain tissue from the deep tube. All the tubes were taken out, shortened, and replaced. His temperature was 100·4° and his breath offensive, so he was given six grains of calomel, and in the evening six grains more with three of jalapin, and then his bowels acted once and his temperature next morning was below normal, and never rose above normal during the remainder of his illness. The deep tube was removed on the 20th (sixth day), and the superficial ones on the 23rd (ninth day), as well as the stitches; the wound was soundly healed, except the holes for the drainage-tubes. His mind was much clearer, but his memory was very bad and his behaviour very childish, and he had double ankle clonus and exaggerated knee jerks. A glycerine enema was given from time to time to relieve the constipation. On the 27th (thirteenth day) he sat up in bed and read the paper, and had his eyes examined ophthalmoscopically, when the discs were found to be normal. He dressed and got up on Aug. 1st (eighteenth day), when he complained of weakness of his left leg (the reflexes had always been more brisk on this side), and said he felt as if his mind was not quite right, and that he remembered nothing of the accident or any of the events of the previous two or three days. He talked rationally, but smiled idiotically, when answering questions. When discharged on Aug. 17th he still complained of the weakness of his left leg, and his friends recognised a difference in his general behaviour. When last seen in the spring of 1891 he seemed quite himself, and had been at his usual work ever since a few weeks after his discharge from the hospital.

This case illustrates, what so many have done before, the good results to be obtained in the most severe compound fractures of the skull by antiseptic treatment, and the latter, combined with good elastic pressure by absorbent wool, will no doubt greatly lessen, if not abolish, cases of hernia cerebri. The development of double ankle clonus and exaggerated knee-jerks was due, I think, to the general mal-nutrition (as shown by the rapid wasting of his body) in which the cerebral cortex participated. A similar cause may account for the symptoms developing in some cases of neurasthenia and hysterical paraplegia.

Alresford.

THE TREATMENT OF GRANULAR LIDS BY THE USE OF A PERCHLORIDE OF MERCURY POINT.

BY SYDNEY STEPHENSON, M.B., F.R.C.S. EDIN.

AT the last meeting of the Ophthalmological Society, during the course of a discussion on the treatment of trachoma by perchloride of mercury, Mr. H. Juler remarked that he had obtained good results by using the perchloride in solid form. Since the particular form of application alluded to by Mr. Juler was introduced by me in 1886, and as I have used it extensively since that date, I have thought it advisable to place certain facts concerning the composition, manufacture, and employment of the remedy before the profession at large. The points are prepared by fusing together (in a Hessian crucible) perchloride of mercury and nitrate of potassium, and casting the fused mass into small conical points, in appearance resembling those composed of nitrate of silver, and familiar to every surgeon. At the onset, before the remedy had emerged from the experimental phase, the points were made of various strengths; for example, one part of perchloride was combined with two, three, four, or more parts of potassium nitrate. Soon, however, it was found that the stronger points were undesirable on account of their energetic action on the conjunctiva, and for some time I have used nothing but the 1 in 5 strength, which is, I consider, sufficiently potent for all ordinary purposes. The makers of the points (Messrs. Drane & Co., of West Norwood, S.E.) tell me that the process of manufacture is a somewhat complicated affair, requiring special precautions to be taken in order that the result may be satisfactory; but into this matter it is unnecessary for me to enter. The points themselves have a white, porcelain-like appearance. They dissolve readily in hot water, and in use become very smooth. They do not appear to be affected by the lapse of time. An analysis shows that the points consist chiefly of potassium chloride, with a much smaller quantity of mercuric chloride (corrosive sublimate).

Turning now to the indications for the employment of the points in trachoma, it may at once be said that their use is contraindicated when acute inflammatory symptoms are present; such cases are better treated in other ways. I do not, however, recognise in pannus or ulcers of the cornea any such contraindication; these complications, indeed, are not infrequently benefited by the use of the perchloride point. The cases, however, in which the remedy discussed is specially indicated are those of long-standing chronic trachoma, with or without pannus. Cases of this description, if treated for a sufficient length of time (six months to two years, or longer), often receive great benefit from, and for that matter may be completely cured by, the persistent use of the perchloride point. In such cases, the grains, becoming smaller and smaller, at last disappear; the papillary proliferations and the general thickening of the conjunctiva become much reduced, till in the end the conjunctiva is left smooth, pale, and scarred—in other words, cure is complete. The perchloride point, moreover, is an excellent alternative, and may usefully replace the more ordinary remedies when these have lost their power of effecting further improvement in a given case. Even after many trials, I am by no means convinced that early slight cases of granular lids improve under the use of the point. I am inclined, indeed, to think that these cases do better when subjected to a milder form of treatment. On the other hand, I am quite convinced that in certain cases (inconsiderable in point of numbers, but important to recognise) the perchloride point, so far from doing good, does absolute harm.

A few words as to the method of using the stick may not be out of place. It should, I think, be applied once a day very lightly to the conjunctiva of the everted upper and lower lid, the membrane being washed with water immediately after the application has been made. At first, at least, this should be the plan employed in using the remedy; though later, as the conjunctiva becomes more tolerant of the perchloride, the washing-off process may be omitted. When a case is approaching cure, applications should be made less frequently, treatment two or three times a week sufficing perhaps to effect the desired result. In conclusion, it is necessary to point out that an unduly energetic application of the point will produce a slough of the conjunctiva. In this event, the use of the stick must, of course, be suspended until such time as the slough has disappeared.

Ophthalmic School, Hanwell, W.

ELECTRO-THERAPEUTICS.

BY DAWSON TURNER, M.D. EDIN., M.R.C.P. LOND.,
PHYSICIAN TO THE LIVINGSTONE MEMORIAL DISPENSARY.

WITH regard to Dr. Cardew's interesting article upon the treatment of Graves' disease by galvanism, one or two remarks may be permissible. In the form of battery for

self-application which he suggests he makes no distinction between patients in regard to the greatly diminished resistance of the tissues more or less present in this disease, although he lays some stress upon the importance of keeping the current below three or four milliampères. In a patient under treatment by me now the resistance of the tissues is so diminished that three Leclanché cells, with electrode of one inch and a half and two inches, moistened with warm water only, give a current from beneath the mastoid process to the seventh cervical vertebra of from six to seven milliam pères; and that although their electro-motive force has through time and use fallen to three volts. The resistance of the tissues is therefore in this case only equivalent to some 500 ohms (a result I confirmed by measurements with a Wheatstone bridge), instead of to the 2000 to 3000 ohms that Dr. Cardew mentions, and the battery that he recommends would give very much too strong a current. It would no doubt be exceedingly advantageous if we could trust patients to apply the current themselves, but such patients are *raræ aves*, and in the majority of cases, and especially in galvanisation, when there is no very obvious result for the patient to observe, the application is performed in a more and more perfunctory manner; the cells are not taken care of, and are often short circuited, and the patient loses heart and gives up the treatment in disgust. Just as in all other modes of treatment, but particularly in this, where so much attention to detail is necessary, and where so much depends on a steady and prolonged series of applications, the physician must be constantly at hand, and by the skilful supervision he exercises, as well as by the encouragement to persevere he gives and the confidence he inspires, do that which is so important to secure the success of the treatment. It is otherwise in the case of the induced current for paralysis, where the patient not only hears the interruptions of the hammer, but feels the stinging sensation and is conscious of the muscles contracting. I fear also that Dr. Cardew is somewhat too sanguine in supposing that patients can make much good use of the coulombmetre. One such patient I have had, and by my advice he used a cheap galvanometer, and by it he could not only certainly see that a current was passing *when he was making the application*, but also its strength. I should like to say a word with regard to the reaction of degeneration. I have a case under observation, a soldier, aged forty-five, with right hemiplegia, probably due to syphilitic arterial disease, whose affected muscles regularly react at first to the anode, opening and closing only, after a time to the kathode closing also, and, last of all, more vigorously to the latter than to the former. Faradaism to both nerves and muscles at first also produces no effect, but after a time causes contractions which are less in quantity than they should be. These changes all occur during an ordinary séance of twenty minutes.

Edinburgh.

NOTES FROM PRACTICE.

By R. ROSS, M.D. ST. AND., L.R.C.S. IREL.,
PHYSICIAN TO THE ROYAL HOSPITAL, BELFAST.

FORECASTING THE SEX OF THE CHILD BEFORE BIRTH.

FOR many years I have been in the habit of successfully determining the sex of the child from the position in which the mother describes the fœtal movements to be most marked and constant. Most women can, but some cannot, differentiate the locality. In those who can I find the following rule applies. If the fœtal motions are chiefly and most intensely felt on the left side, predict a male; if on the right, a female. I take the following cases from my note-book:—

1. S.	Chief site of fœtal motions left side.		Male birth.
2. C.	do.	do.	do.
3. M.	do.	do.	do.
4. Mac.	do.	do.	do.
5. S.	do.	do.	do.
6. B.	Chief site of fœtal motions right side.		Female birth.
7. Sm.	do.	do.	do.
8. St.	do.	do.	do.
9. B.	do.	do.	do.
10. Mc.	do.	do.	do.
11. Ma.	do.	do.	do.

THE TREATMENT OF LUMBAR ABSCESS FROM CARIES OF THE VERTEBRÆ.

The usual practice is free opening and drainage. This course, for various reasons, cannot always be carried out, and then the aspirator needle, as in the following case, is safer and less painful and less repulsive.

C——, aged twenty-six, caries of dorsal vertebræ, angular curvature, and large lumbar abscess. I twice removed a large quantity of pus by aspiration. The abscess was completely and permanently cured by the second operation. This gentleman is now quite well. I may mention that he had the advantage of a healthful residence in the country, cod-liver oil and arsenic, a plain, nutritious diet, with bitter ale; and, though last not least, a well-fitting spinal support.

THE TREATMENT OF EMPYEMA.

G——, female, aged seventeen. Left pleura filled to the clavicle with pus; heart displaced to the right side. This lady was reduced to an extreme state of anæmia and exhaustion, so much so that a free opening and drainage were out of the question. I removed the pus by aspiration, using chloroform and a large needle, completely evacuating the pleural sac. The patient made a good recovery, and she is now quite well, and has been so for a year. What is still more remarkable, the respiratory movements and sounds are quite normal on both sides.

THE TREATMENT OF CHRONIC BRIGHT'S DISEASE IN WHICH ALBUMEN IS PRESENT.

I find the best means of lessening the amount of albumen in the urine is the use two or three times daily of bicarbonate of soda and carbonate of bismuth. The importance of warm clothing, relieving bowels by cascara and aloes, and a dietary of milk, eggs, and vegetables, the farinaceæ, and Benger's food I cannot too much advocate, to the exclusion of iron and a meat diet. What I wish to insist on most is the power of the continued use of the alkali and bismuth in decreasing the albumen and in improving the general condition.

Belfast.

PNEUMONIA DURING PREGNANCY.

By FRED. W. MANN, M.B. EDIN.,
LATE HOUSE SURGEON, ROYAL MATERNITY AND SIMPSON MEMORIAL HOSPITAL, EDINBURGH, ETC.

THE following case is worthy of being put on record on account of its rarity, and, secondly, because of the high mortality of cases of pneumonia during pregnancy.

The patient, Mrs. Mc——, residing in Edinburgh, aged forty-two years, married twenty-five years, took to bed on Dec. 28th, 1890, on account of a rigor. When I was summoned the next day she had well-marked symptoms of pneumonia (right lung) and a temperature of 103°F. She was also about eight months pregnant. An unfavourable prognosis was given to the husband. The fœtal heart sounds could be heard for five days after the rigor, when, owing either to change of position or death of the fœtus, I could no longer hear them. The patient had given birth to twelve children. She had had three abortions and two premature labours. The first abortion occurred after the second pregnancy, at the end of the second month; the second after the fifth pregnancy, at the end of the second month, or tenth week; and the third after the tenth pregnancy, at about the tenth week. The first premature labour occurred after the fourth pregnancy, and the child lived two days. The patient last menstruated on May 29th, 1890; quickened about the middle of August; and labour commenced on the night of Jan. 10th, 1891, thirteen days after the rigor. The crisis occurred on Jan. 6th, 1891. She was delivered on Jan. 11th of a stillborn premature child (between eight and nine months) On examination per vaginam the child's head was found to lie in the right oblique of mother, with occiput posterior. Forceps were applied without chloroform; head took short rotation. I delivered the head slowly, to allow the circulation to adapt itself; but, notwithstanding, as soon as the head was born the patient became cyanosed. I delivered the body quickly, cut the cord, and allowed her to bleed considerably, when she regained a better colour. The hæmorrhage was easily controlled by removing the placenta, and the administration of a hypodermic injection of ergotin. I did not have any nitrite of amyl, or I should have given her a few

drops to inhale. She made an uninterrupted recovery after delivery, and in six weeks' time was up and going about the house. The temperature during the puerperium was never above 101·4° F. The patient had ordinary treatment for pneumonia—i.e., hot poultices to chest, salines, early use of stimulants, with digitalis and tonics.

The following points in the case are worthy of note: The favourable result, exact date of rigor, labour set in after the crisis, cyanosis after delivery of head, and puerperal temperature. The temperature was taken for about four weeks after delivery.

NOTE ON THE VALUE OF IGNIPUNCTURE IN THE TREATMENT OF HYPERTROPHIED CERVIX UTERI.

BY ALEXANDER DUKE, F.R.C.P.I.,
EX-ASSISTANT MASTER, ROTUNDA HOSPITAL; GYNÆCOLOGIST, STEEVENS'S HOSPITAL.

THE length of time occupied by the usual routine treatment of a case of chronic hypertropied cervix uteri can be considerably shortened by the judicious use of ignipuncture. The usual plans of treatment—viz., tampons of glycerine, copious syringing with very little hot water, painting cervix with Churchill's tincture of iodine, &c.—occupy a very considerable time, which prolonged treatment (unless the patient is able and willing to pay for) "is more honoured in the breach than the observance." Superficial firing by caustics or smouldering pieces of carbon held in contact with cervix by forceps is not sufficient in well-marked cases of chronic hypertrophy to obtain the desired result within a reasonable time. Having observed the good effects on enlarged tonsils by the employment of ignipuncture, I have given it a trial, and can strongly recommend it as a useful adjunct in these cases. A thermo-cautery of small size and point (Paquelin's) will be found the best for the purpose, but those who do not possess this valuable instrument can obtain equally good results with a copper rod, sharp at the point, and with solid bulb about half an inch from the top, so as to retain the heat while the necessary number of punctures are made through a wooden or celluloid cylindrical speculum. This cautery can be heated with an ordinary spirit lamp till red-hot, held in the tissues for a few seconds, while each puncture, about a quarter of an inch, is made, and then withdrawn. There should be no bleeding observable if the operation has been properly performed, such being caused by the cautery being either too hot or too cold. My usual practice is to blow a little boric acid (with my vaginal insufflator) over the punctured surface, and make no examination for about a week, when the operation can be repeated if necessary. I have also found ignipuncture of great value in lacerations of the cervix when hardly bad enough to demand Emmet's operation. Little pain, if any, is produced unless the operator is unwise enough to allow the patient to observe the preliminaries.

Dublin.

A Mirror
OF
HOSPITAL PRACTICE,
BRITISH AND FOREIGN.

Nulla autem est alia pro certo noscendi via, nisi quamplurimas et morborum et dissectionum historias, tum aliorum tum proprias collectas habere, et inter se comparare.—MORGAGNI *De Sed. et Caus. Morb.*, lib. iv. Proœmium.

CHARING-CROSS HOSPITAL.

NEPHRO-LITHOTOMY; TWENTY CALCULI REMOVED FROM THE LEFT KIDNEY; RECOVERY.

(Under the care of Mr. JOHN H. MORGAN.)

IT is evident that this patient has from a very early age been a victim to a defective elimination of certain excreta. Before 1871 he had suffered from premonitory attacks, but in that year he experienced pain in the right kidney, and during a severe illness in October, 1882, when he was attended by Dr. Lionel Beale, who has favoured Mr. Morgan with notes of the case, he passed a rough stone about the size of a bean, and consisting of brittle phosphates throughout, after which the urine often contained phosphates and frequently blood-corpuscles. It was not until 1889 that pain was referred to the left kidney, which was not aggravated by jolting, and in August of that year the urine, sp. gr. 1020, was found to contain oxalate of lime crystals and a slight amount of albumen, with a few blood-corpuscles. The subsequent history is given below, and has been kindly furnished by Dr. Grinling Bunn of Norwood, who prevailed upon him to consult Mr. Morgan, with the result here given. The state of the kidney, as ascertained at the operation, showed remarkably little disorganisation, and it seemed extraordinary that such a quantity of calculi could be formed in so short a period as the history indicates, and should not have interfered to a greater extent with the outflow of urine from the pelvis. The larger stone certainly projected down the ureter, and the smaller ones lay below and behind it, but the kidney was not enlarged and the pelvis but little dilated, while the pyramids were little altered from their usual size and shape. The patient has already improved greatly in health and strength, and if he can correct the tendency to the formation of deposits there is every hope that he may look forward to a healthy and useful life. For the following notes we are indebted to Mr. Parham, surgical registrar.

W. J. G——, a well-nourished man, but anæmic and careworn, was admitted on June 11th. His antecedents were gouty and his mother died of phthisis. He is now forty-three years of age, but from childhood has suffered from calculous symptoms. When about seventeen or eighteen he suffered from paroxysmal pains in the left loin, lasting from half an hour to an hour, shooting down the front of the abdomen, but not, as a rule, into the testis. These were accompanied by vomiting and fits of shivering. During and after the paroxysm the urine was passed frequently, and in large quantity, occasionally containing gravel, sometimes accompanied with blood, either in large quantities or only enough to make the urine smoky. Up to the age of twenty there were five or six such attacks, lasting from two to six weeks, always ending with the passing of a stone. At the age of twenty a more severe attack occurred, lasting about nine weeks, during which he was attended by Dr. Lionel Beale. The pain was then referred to the region of the right kidney, and ceased on the passing of a small calculus. Up to three years ago he has had comparative immunity, and has been able to walk and drive without pain, the urine being always clear. At that time, however, there was a return of the pain in the left loin, accompanied by vomiting, but no hæmaturia, the attacks being followed by polyuria. For the first eighteen months the paroxysms recurred variably every week or month, after which they became less frequent. A year ago he was compelled to leave his business on account of the pain in the left loin, which was always aggravated at night, and when the bowels were confined. Latterly the pain, though severe, has not had the same paroxysmal character as formerly, has not been accompanied by vomiting, shivering, or hæmaturia, and has not been accentuated by exercise. He has been obliged to rise once or more in the night to pass urine during the last few years. On examination there was found a spot, situate about two inches from the line of the vertebræ and a little below the first rib, where pressure caused distinct pain, no pain being felt on pressing over the anterior surface of the left kidney. The urine was neutral, sp. gr. 1018, a trace of albumen, no sugar, slight amount of mucus. Some oxalate of lime crystals were seen under the microscope, and a very few corpuscles of blood. He left the hospital for a few days to arrange his affairs, and on readmission the evidence of local tenderness was confirmed. After the examination he complained of pain running down to the left testis, and the urine showed a few more blood-cells and pus-corpuscles besides the crystals of oxalate of lime. On June 26th he had a severe paroxysm of pain, during which he vomited twice.

On July 4th Mr. Morgan operated, making an incision four to five inches in length parallel with the last rib and about half an inch below it, commencing at the outer border of the erector spinæ, and dividing the inner fibres of the quadratus lumborum. The peri-nephritic fat was abundant, and was torn through and the kidney explored with the finger. A stone was at once felt in the pelvis; but, owing to the depth at which the kidney lay, it was exceedingly difficult to fix the organ before incising. This was done by seizing

the capsule with a pair of catch forceps and drawing it into the wound at the same time as pressure was made on the abdominal surface by an assistant. The fibrous covering of the pelvis was then opened with a bistoury, and a large mulberry calculus extracted by aid of a scoop. Nineteen smaller separate calculi were subsequently removed which lay in the pelvis and calyces. The secreting structure of the kidney did not appear to have been very extensively damaged or diminished. There was not much hæmorrhage, and, the wound having been washed out with warm boracic lotion, a drainage-tube was inserted into the pelvis and the wound united by deep and superficial sutures. The parts were dressed with sal alembroth gauze and covered with wood wool. The patient was in considerable pain after recovering from the ether, and reqired injections of morphia. The discharges permeated the dressings, which were packed but not changed. At a quarter to eight a catheter was passed, and sixteen ounces of blood-stained urine were withdrawn. No vomiting. Temperature 98·4°; pulse 88. The catheter was required next day, but on July 6th the urine was passed naturally, and contained deep red sediment consisting of blood and pus-cells. The wound was perfectly healthy. For the next few days less and less urine came through the wound, and on the 10th the tube and stitches were removed, the wound looking perfectly healthy. On the 11th he had a slight rigor, the temperature rising to 101°, and on the 12th a more severe one, when the thermometer marked 104°, but there was nothing in the appearance of the wound to cause anxiety. These symptoms did not recur, and the patient went on perfectly well, and was discharged from the hospital with the wound firmly healed on July 28th. The larger of the calculi weighed 141 grains, and was irregularly conoidal in shape, the blunted apex having projected into the commencement of the ureter, whilst the base filled a large portion of the pelvis of the kidney. The colour was a deep madder brown on the surface, and a few crystalline deposits of phosphate of lime adhered to one or two spots. The surface was irregularly mammillated, and there were no very sharp projections. The total weight of the calculi amounted to 156 grains, the remaining stones being all separate and unbroken, and resembling in shape and appearance a number of small "sea urchins." The composition as ascertained by analysis was pure oxalate of lime.

SOUTH DEVON AND EAST CORNWALL HOSPITAL, PLYMOUTH.

A SHORT SERIES OF RENAL CASES; REMARKS.

DURING the last two or three years our knowledge of the operative treatment of many diseases of the kidney has considerably extended, and much advance has been made in this department of surgery. Two of this series of cases are of special interest. In the first, that of hydronephrosis in a woman (and hydronephrosis is more common in females), the usual treatment having failed, excision of the kidney was successfully performed and the patient cured. In the second, where it is probable that a partial rupture of the kidney had resulted from the injury described, simple aspiration without drainage sufficed for a cure. We have published this year other interesting renal cases from this hospital,[1] and for them and for the notes of these cases we are indebted to Mr. W. Gifford Nash, house surgeon.

CASE 1. *Hydronephrosis; nephrotomy; renal fistula; nephrectomy; recovery.* (Under the care of Mr. WHIPPLE.)—A. M——, aged forty-two, a married woman, was admitted on Aug. 5th, 1890. She stated that two years previously, whilst lifting a piano, she felt something give way in the left loin. She vomited at the time, and soon afterwards noticed a lump in the left half of the abdomen, which gradually increased and gave very little pain. About once a month she had an attack of vomiting, followed by decrease in the size of the lump, and an increase in the amount of urine passed.

On admission there was found in the left loin an elastic, rounded, fluctuating swelling, reaching up under the costal margin, and downwards a little below the umbilicus. There was bulging in the ilio-costal space. An aspirating needle was introduced, and a fluid of neutral reaction and free from albumen drawn off.

On Aug. 16th lumbar nephrotomy was performed, and the pelvis of the kidney explored. It was enormously dilated, holding three pints of urine, but no cause was found. The kidney was drained, but showed no disposition to heal. Urine containing pus and albumen drained from the loin, but the urine from the bladder was normal.

On Nov. 7th a loin urinal was fitted, and next day the patient left the hospital. She was kept under observation. The urinal worked well, but the patient gradually lost flesh, probably due to the constant drain of albumen in the urine from the left loin. The daily average of urine from the left loin was about fifteen ounces, and from the bladder thirty-five ounces.

On May 19th, 1891, the patient was readmitted for nephrectomy. The daily average of urine for ten days previous to operation was from the loin thirteen ounces, and from the bladder thirty-two ounces. On June 8th the left kidney was removed through the loin. The pelvis and calyces of the kidney were considerably dilated, and the cortical substance pale, thin, and fibrous. The wall of the pelvis was thickened and the mucous membrane roughened. The ureter was of natural size up to its junction with the pelvis, where it appeared to be narrowed, as if the result of a bend or kink. The patient left the hospital quite well on July 6th. The daily average of urine for three weeks after the operation was thirty-one ounces.

Remarks.—What the exact nature of the constriction was could not be ascertained, as the ureter unfortunately broke away from the pelvis at the operation. It seemed probable that it was either a twist or kink of the ureter of a movable kidney, or else a partial rupture of the coats of the ureter at its junction with the kidney pelvis. At any rate, the obstruction was at the junction of the pelvis and ureter, and its probable cause was the strain due to lifting the piano.

CASE 2. *Traumatic renal cyst; aspiration; cure.* (Under the care of Mr. SWAIN.)—E. B——, aged six, was admitted on October 21st, 1890. It was stated that five months previously the boy fell and struck his right side against a bucket. A few weeks later his mother found a lump on the right side of the abdomen. This increased rapidly.

On admission, he was a well-nourished, rickety child. In the right half of his abdomen was a firm swelling extending into the loin and continuous with the kidney. Intestine lay in front of it. It extended up under the ribs, but between it and the liver was a sulcus. Fluctuation could not be obtained. The urine was acid and free from albumen. An exploratory operation was proposed, but the parents refused to consent to one. He left on Oct. 28th, but remained under observation. As he got no worse and the lump remained unaltered, on April 14th, 1891, he was readmitted. On the 16th the tumour was aspirated through the right loin, and thirty-one ounces of pale, almost colourless fluid, with a specific gravity of 1009, drawn off. This fluid contained very little urea, and under the microscope were seen a few blood-cells. When the fluid was drawn off the kidney could be felt, not at all enlarged. There has been no sign of reaccumulation of fluid.

Remarks.—This appears to have been a case of peri-renal urinary cyst, probably due to rupture of the pelvis of the kidney. At first it was thought that it might be a malignant growth, but the stationary condition of the growth and the absence of constitutional symptoms negatived this.

CASE 3. *Pernicious anæmia; single kidney.* (Under the care of Dr. PRANCE.)—J. McD——, aged sixty, a sailor, was admitted on Feb. 11th, 1891, and died on March 5th. He had all the typical symptoms of pernicious anæmia. At the post-mortem examination it was found that the left kidney was very much enlarged, in the usual position, and with normal bloodvessels. There was not the slightest trace of the right kidney or ureter. A very small artery, apparently representing the right renal, was distributed on the posterior surface of the ascending colon.

LEEDS GENERAL INFIRMARY.

A CASE OF SPONTANEOUS RUPTURE OF THE BLADDER.

(Under the care of Mr. W. H. BROWN.)

THIS case, a very unusual one of extra-peritoneal rupture of the bladder, presented difficulties in diagnosis which could not be overcome in the absence of history. Even with the light thrown on the case by the

[1] THE LANCET, vol. i. 1891, pp. 1070-1123.

post-mortem examination, it is difficult to account for the giving way of the bladder. Stricture of the urethra, with alteration in the normal structure of the bladder, is recognised as a predisposing cause for rupture, and a stricture was found; but the stricture is usually one producing marked obstruction to the flow of urine, and the changes in the bladder wall are easily seen. These changes include: (1) the formation of diverticula of the mucous membrane, with hypertrophy of the muscular coat; (2) ulceration, sloughing, or gangrene of the mucous membrane secondary to a cystitis; (3) thinning and weakening of the coats of the bladder.[1] The only evidence of rupture of the bladder was that produced by the cellulitis resulting from the escape of urine into the subperitoneal tissues. There was no account forthcoming of a likely injury; no inability to micturate; no trace of blood in the urine; the catheter when passed drew off clear urine, showing the bladder was not unduly contracted.[2]

S. S——, a mechanic, aged thirty-nine, was admitted to the infirmary on June 29th, 1891, in a dying condition. The abdomen was much distended and tympanitic, with the exception of the left iliac region, which was dull; the skin over this portion of the abdomen was slightly œdematous and discoloured. The man was too ill to give any account of himself, and as the distention appeared to be the chief cause of his distress, a small incision was made in the middle line, giving exit to a large quantity of coffee-coloured fluid, which had a distinctly urine-like odour. Before anything further could be done the patient died, apparently from heart failure. His history, afterwards obtained from the friends, was as follows. The deceased had always been a healthy man, leading an active life, playing cricket up to a week before admission. On June 22nd he began to have a little pain in the body, but did not consult his doctor till a day or two later, when he began to vomit. He was then seen by his usual medical attendant, who found the abdomen distended and signs of intestinal obstruction. These continued in spite of treatment. No history of accident of any kind could be elicited. A catheter was passed before he was sent to the infirmary, and clear urine withdrawn.

On post-mortem examination, the incision made before death opened into a large cavity between the peritoneum and the abdominal wall. This cavity extended upwards towards the left kidney, and contained a quantity of fluid similar to that which was let out before death. At the extreme limit of the cavity there were distinct signs of suppuration. At the fundus of the bladder there was a small opening, half an inch in diameter, leading into the cavity, formed by the stripping of the peritoneum. The edges of the bladder opening were rounded off and smooth; there was no sign of recent bleeding. The peritoneal cavity contained about two pints of serous fluid; the intestines were greatly distended; there was no mechanical obstruction. There was a stricture of the urethra of old standing capable of admitting a No. 6 catheter. The bladder was a little thickened, but otherwise natural. The body was, generally speaking, well nourished, and the viscera healthy.

Remarks by Mr. BROWN.—In THE LANCET, vol. ii 1888, p. 208, I published the notes of a case of rupture of the bladder occurring in a healthy man, where the history threw no light on the condition. In the present case the rupture was extra-peritoneal, and the symptoms remained in abeyance for some days after the probable time of giving way of the bladder. It seems likely that at the actual time of rupture some blood would have been passed by the urethra; of this, however, no history could be obtained. In both of these cases the position of the rupture corresponded with the spot upon which the point of a catheter, introduced into the bladder, would impinge.

[1] Rivington: Heath's Dictionary of Surgery.
[2] Jacobson: The Operations of Surgery, 2nd edition, p. 948.

RABIES IN NORTHAMPTONSHIRE.—At a meeting of the Executive Committee of the County Council of Northamptonshire, Earl Spencer in the chair, it was decided to issue muzzling orders for nineteen parishes. This course was rendered necessary owing to the ravages of a mad dog, which had before it was killed bitten twelve other animals, including two valuable fox-hounds belonging to the Pytchley Hunt.

Reviews and Notices of Books.

Diphtheria; its Nature and Treatment. By ROBERT WILLIAM PARKER. Third Edition, largely rewritten. London: H. K. Lewis. 1891.

THE admitted value of this excellent monograph has been enhanced by the introduction of much new matter into this edition. Mr. Parker has prefixed to his description of the operation of tracheotomy and all that surrounds it a brief account of present knowledge concerning the nature of diphtheria and its manifestations. He declares himself convinced that the disease has a germ origin, that it is essentially local at first, and then becomes generally infective—a view borne out strongly by Oertel's elaborate histological studies, to which Mr. Parker adverts. The adoption of this idea of its nature harmonises with another view held by Mr. Parker, that, namely, of a local predisposition. He says that he has often met with sporadic cases in families where the opportunities for thorough sanitary precautions have been of the smallest, and that he is quite at variance with the view that there is any special family proclivity to the disease. Nevertheless, since he lays such great stress upon local conditions of throat—pharyngitis, tonsillitis, post-nasal growths, &c.—as predisponent to infection, or rather as affording a certain receptivity to the contagion, it is not extravagant to assume, for members of the same family, a similarity in such local conditions. That diphtheria is primarily local and secondarily systemic is, we believe, almost beyond question. It is a conception of its nature that affords most encouragement for early and thorough local treatment; and it accords with the clinical development of the disease as well as with modern investigations upon the diphtherial virus. Mr. Parker's description of the symptoms of diphtheria and its complications is exact; but it might with advantage have been more fully elaborated. We note that he attributes (p. 47) cardiac failure or syncope to paralysis of the vagus nerve; and, without gainsaying the accuracy of this view, we think it should be held with some reserve; for we are not cognisant of any definite facts (anatomical) in support of this contention. On the other hand, that the cardiac muscle may be profoundly affected by the diphtheritic poison is indubitable. No doubt there is truth in both interpretations of sudden death in diphtheria, an event which we agree with Mr. Parker to be "very common."

The reader will turn with most interest to the chapters devoted to tracheotomy and its after-treatment, in the hope of finding there the fruits of the author's recent experience. And he will not be disappointed. It seems to us that Mr. Parker has materially modified several of his views and procedures, all in the way of improvement. Most important is his adoption of what may be called the "rapid operation"—that in which the trachea is opened by two incisions, the first through the skin and fascia, and the second into the trachea, guided by the intermuscular "white line" which occupies the centre of the neck. In Mr. Parker's hands such an operation has doubtless advantages, but for the majority the risks of hæmorrhage and of emphysema may be more surely obviated by more deliberate dissection. The angular tube invented by the author, and shown by him to be in every respect better adapted to the form and position of the trachea, is a distinct advance upon all other forms, and should be generally adopted. Every detail of the operation here described shows the fertility in resource of the writer, who, amongst other forms of apparatus, has invented a trachea aspirator for the removal of material obstructing the trachea or bronchus. He condemns as useless and hazardous the direct application of the operator's

lips to the tracheal wound. The after-treatment of tracheotomy involves great care and watchfulness in nursing, and Mr. Parker's advice on this head is very judicious. In the following chapter he enters fully into the complications and sequelæ of the operation, such as diphtheria of the wound, erysipelas, emphysema among the immediate results, and chronic changes in the trachea due to the condition for which the operation was performed, or to irritation from the tube and other causes. Most difficult of explanation are those cases of sudden death in the tracheotomised, of which the author gives examples, which have nothing to do with tracheal obstruction, but which Mr. Parker suggests may be paralleled by cases of sudden death after opening or washing out the pleural cavity, and referable to irritation of peripheral branches of the pneumogastric nerve. A brief description of intubation of the larynx (with which, by the way, Mr. Parker does not seem to be much impressed) completes a monograph that for grasp of the subject and lucidity in its exposition is a model of what such writings should be.

On Painful Menstruation: The Harveian Lectures, 1890. By FRANCIS HENRY CHAMPNEYS, M.A., M.D.Oxon., F.R.C.P., Physician-Accoucheur and Lecturer on Obstetric Medicine at St. Bartholomew's Hospital. London: H. K. Lewis. 1891.

WE welcome this volume, which consists of the Harveian Lectures delivered in 1890 by Dr. Champneys, and which were published at that time in THE LANCET, as a monograph written by an able and judicious man, with large experience and wide reading, on one of the most debatable subjects in gynæcology. As the author states, painful menstruation is a subject of great difficulty, and it is a symptom which is constantly being brought before the attention of the general practitioner as well as of the specialist. "To collect the truth, so far as it has been ascertained, into an easily accessible form," has been Dr. Champneys' object, and all through the book this is very evident. In the first lecture the author gives a brief account of what is known of menstruation, noting the changes which different authorities have described as occurring in the uterus. He records an interesting observation pointed out by Dr. John Williams, that "the human fœtal uterus shows a distinct submucous layer just beneath the peritoneum, and this makes the whole of the tissue internal to this mucous membrane." We think, in this connexion, it is a pity Dr. Champneys has made no reference to the views of Bland Sutton and Johnstone, which are well worthy of consideration. We are thoroughly at one with him in thinking that "there is a danger of microscopical investigations inducing a near-sighted view," and when the facts and theories of different observers are so contradictory, we are forced to rely rather on clinical observations. Dr. Champneys believes "that the thickening of the mucous membrane is due to growth; the bleeding is due to increasing afflux of blood to the uterus in common with the pelvic organs, on the top of which comes uterine contraction which determines the hæmorrhage." He does not give any theory of menstruation, and in this he is quite right, for until we know something definite as to the causation of the phenomenon, it is useless to speculate.

After defining the pain of dysmenorrhœa as being contained within the "genital sphere"—that is, limited above by a line level with the iliac crests in front and behind, and by the level of the knees below—the author discusses the various classifications of dysmenorrhœa, and finally divides all cases of painful menstruation into inflammatory and spasmodic. In the second lecture we have an account of membranous dysmenorrhœa (which the author classifies as a variety of the spasmodic), which, we think, is the most complete article on this subject in the English language. The history, pathology, and differential diagnosis are discussed very fully, and the literature of the subject is given in a separate table. In speaking of the treatment, which, he admits, is, as all men of experience have found out, unsatisfactory, Dr. Champneys says he should feel tempted to try scraping the uterus, not once, but repeatedly, with an irrigating curette, flushed with antiseptic solution, preceded by dilatation.

In the last lecture the author gives an account of spasmodic dysmenorrhœa, and, in our opinion, thoroughly upsets the mechanical theory that the pain is due either to flexion, stenosis, or chronic congestion produced by flexion. We know by experience how much importance is still attached by many practitioners and students to anteflexion of the uterus. We think that a perusal of this book would show them how wrong their previous teaching has been. In speaking of the treatment of spasmodic dysmenorrhœa, Dr. Champneys recommends castoreum as a drug which he has found very useful. From twenty to thirty drops of the tincture are to be given three or four times daily during the pain, with or without a few drops of tincture of nux vomica. In his reference to the dilatation plan of treatment, the author tells us he prefers to do it at one sitting, under anæsthesia, with full antiseptic precautions. We do not think that in the great majority of cases any anæsthetic is necessary, and we know that this plan of treatment has been carried out with the greatest advantage in the consulting-room as well as in the out-patient department of a large hospital. In conclusion, we have no hesitation in expressing the opinion that this book is the *locus classicus* of the literature of painful menstruation, and it should be in the library of all gynæcologists, as well as of general practitioners.

The Microscopical Anatomy of the Human Heart. By ARTHUR V. MEIGS, M.D., Physician to the Pennsylvania and Children's Hospitals. Reprinted from the Transactions of the College of Physicians of Philadelphia. June, 1891.

IN this pamphlet Dr. Meigs gives the results of his examination of a large number of hearts, the conditions of which were investigated with a view to following the changes occurring in Bright's disease. One result of his labours, he states, has been to lead him to the observation of certain appearances of the normal microscopical structure of the heart which are new, and not commonly known either to histologists or to pathologists. These appearances are connected with the condition both of the vascular supply and of the structure of the muscular fibres. In regard to the vessels, he finds that whilst on the surface of the heart the arteries and veins are provided with the usual three coats, in the muscular walls themselves the veins have, as a rule, only a single coat, which is composed of epithelium, so that in appearance and thickness they precisely resemble a capillary vessel. On the other hand, the arteries can be seen to have three coats until the size of the vessel is little greater than that of the capillaries of least diameter. The single coat of veins, of moderate size in the substance of the heart, is a point of considerable importance. The addition of some measurements and the results of injections would have added to the interest of Dr. Meigs' paper. Another point on which he has satisfied himself is that capillary vessels possessing, as usual, a single endothelial coat, can be seen partly, or even completely, embedded in the muscular fibres of the heart, thus bringing the muscular tissue itself into very close relation with the blood current. Dr. Meigs also notices that the capillaries uniting to form a bloodvessel are very much more numerous than those into which an artery of corresponding size divides, and instead of being united at acute right angles, as in the latter case, are at obtuse or even right angles to each other. The statements in the text are illustrated by a plate.

Examination of Water for Sanitary and Technical Purposes. By HENRY LEFFMANN, M.D., Ph.D., and WILLIAM BEAM, M.A. Second Edition, revised and enlarged, with Illustrations. London: Kegan Paul, Trench, Trübner, & Co., Limited. 1891.

WE are glad to find that a second edition of this excellent little manual has been issued. The various methods recommended by the Chemical Section of the American Association for the Advancement of Science have received due consideration, and a description of the now well-known and much-used Kyeldahl process for the determination of organic nitrogen finds a place. A short chapter on the action of water on lead is given, in which the experiences of several chemical experts are recounted. Observations on this subject are thus summarised:—Corrosive: Free acids or alkalies, oxygen, nitrates, particularly potassium and ammonium nitrates, chlorides, and sulphates. Non-corrosive and preventing corrosion by the above: Calcium carbonate, sodium acid carbonate, ammonium carbonate, calcium silicate, silica, and soluble phosphates. It is satisfactory to find directions in detail given for the biological examination of water—a subject which has not received in published works of this kind the attention it merits. A most useful table is added, giving the culture phenomena of some of the more important microbes, their action on gelatine and potato, and their relation to oxygen, with remarks upon the characteristics which mark their action. This is followed by an able and concise account of the chief methods in use for the purification of drinking water. Of particular interest is the account of the novel process known as Anderson's. In this process the water is treated with iron borings or punchings in a capacious iron cylinder, which is made to rotate rapidly. The effect of the rotation is to scoop up the iron particles, and to shower them down through the flowing water. The purifying effect is due mainly to the formation of ferrous carbonate, through the action of carbonic acid in the water. On exposure to air this is gradually converted by oxidation into the insoluble ferric hydroxide, which carries down much of the organic matter, and subsequently oxidises and destroys it. In addition, temporary hardness is decreased by the abstraction of carbonic acid and consequent precipitation of calcium and magnesium carbonates. The work concludes with an account of the technical applications of water, and a consideration of the fitness of water for steam making, with the remedies that have been suggested for the prevention of boiler incrustation. The book is sure to prove useful to those engaged in analytical as well as sanitary operations, and we commend it especially to the notice of the student who is pursuing this branch of chemical science.

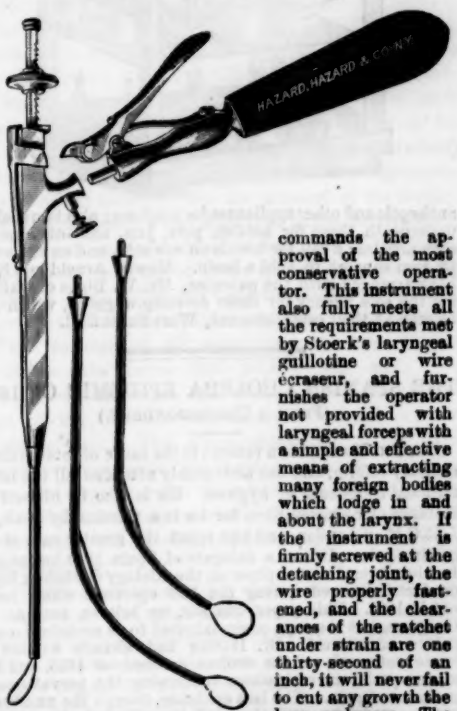
Surgical Anatomy for Students. BY A. MARMADUKE SHEILD, M.B. Cantab., F.R.C.S., Senior Assistant Surgeon, Aural Surgeon, and Teacher of Operative Surgery, Charing-cross Hospital. Edinburgh and London: Young J. Pentland. 1891.

"THIS work contains the substance of demonstrations, delivered by myself, to students in course of preparation for the final examinations." Such is the opening sentence of Mr. Sheild's preface, and it accurately expresses the scope and purpose of the little book. It makes no pretence at being a complete statement of the very numerous clinical and practical bearings of anatomical facts; that would require a much larger work. But, on the other hand, it is by no means scanty in detail, and those who grasp all that is here taught will have a very sound knowledge of what is now commonly understood as surgical anatomy. A special feature of the book is the entire absence of illustrations. Mr. Sheild believes that imperfect anatomical drawings are responsible for many errors, and maintains that the living human body is the only model on which surgical landmarks can be appropriately studied. His book, therefore, cannot with the maximum of profit be read in the library, but only by the side of the living subject. Used thus it will no doubt be found very serviceable.

New Inventions.

A NEW UNIVERSAL DOUBLE-ACTING SNARE.

DR. CHARLES A. BUCKLIN of New York sends us a description of this instrument, for which he claims many advantages. "The wire is attached to a solid stylet, the objections to which are overcome by the powerful ratchet motion which draws it. A screw motion is also attached to the same stylet, thus enabling the operator to use a very slow-cutting snare where hæmorrhage is feared, while the ratchet motion provides a rapid-cutting one where there is no reason to expect hæmorrhage. The handle and ratchet motion may be detached at pleasure, leaving an instrument suitable for the slow strangulation of a very vascular growth. The instrument has a straight tip for the nose and curved tips for reaching the larynx and naso-pharynx through the pharynx. In curved cannulæ all attempts to use flexible stylets under severe traction are dangerous, as they must break sooner or later in making the transit of the curve. With this wire écraseur every benign neoplasm or hypertrophy found in the nose, naso-pharynx, or pharynx can be removed at a single sitting in a manner which



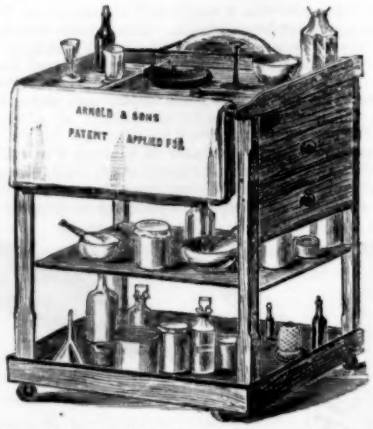
commands the approval of the most conservative operator. This instrument also fully meets all the requirements met by Stoerk's laryngeal guillotine or wire écraseur, and furnishes the operator not provided with laryngeal forceps with a simple and effective means of extracting many foreign bodies which lodge in and about the larynx. If the instrument is firmly screwed at the detaching joint, the wire properly fastened, and the clearances of the ratchet under strain are one thirty-second of an inch, it will never fail to cut any growth the loop embraces. The straight cannula is armed with wire by passing it through the eyes of the slightly projecting stylet from opposite sides. The required loop having been formed, the stylet is drawn by the ratchet motion, and the projecting ends of the wire are cut. The curved tips are armed with wire by bending one-sixteenth of an inch of the end of the wire at an angle of forty-

five degrees. It is then passed through the first eye of the stylet into the opening at the curve of the cannula, with the convexity of the wire impinging on the concavity of the cannula. Emerging sufficiently to form a loop, it is returned through the curved cannula with its convexity impinging on the concave surface of the cannula. When the wire appears at the opening, it is twisted until the bent point is opposite the second eye in the stylet, which it will enter easily, and the loop is complete. By the pressure of the thumb on the top of the instrument the wire loop, after having been drawn, can be returned instantly to position, for further operation, through any of the tips."

Further particulars of the instrument are given in the *New York Medical Record* for July 4th, 1891.

NEW SURGICAL DRESSING WAGGON.

THE accompanying drawing represents a new form of waggon for surgical dressings, which can be moved in any direction easily and silently, being mounted on patent india-rubber castors. It consists of a table with a divided enamelled tray on the top, with two drawers (running through in either direction, so as to be available from either side), which contain



antiseptic and other appliances for ward use; also two shelves underneath these for bottles, pots, jars, and other necessary articles; a rail for towels on one side, and on the other an iron support to hold a basin. Messrs. Arnold and Sons have arranged with the patentee, Mr. W. Biggs of Oxford, for the sole agency for these dressing waggons, which can be seen at their establishment, West Smithfield.

THE SPANISH CHOLERA EPIDEMIC OF 1890.

(FROM A CORRESPONDENT.)

DR. PH. HAUSER is a veteran in the cause of international sanitary reform, and has assiduously attended all the international congresses of hygiene. He is also in himself an instance of cosmopolitism, for he is a German by birth, an L.R.C.P. of London, and has spent the greater part of his life in Spain. It is as a delegate of Spain that he came to London, armed with a paper on the etiology of cholera based on facts observed during the last epidemic which broke out in 1890. This paper was not, we believe, read at the Congress, but the copy communicated to us contains several points of interest. Dr. Hauser had already written an important work on the cholera epidemic of 1885, and had made special investigations concerning the prevalence of cholera in Spain. The last epidemic, though the number of victims was comparatively small, is particularly instructive. The facts, related piecemeal at the time, are probably either in part forgotten or not clearly understood. Dr. Hauser very usefully groups together and systematises this information, and the following are the principal points elucidated. In former epidemics the first town where cholera appeared was generally a seaport, which had probably been infected by imported germs. In 1890 no such theory could be maintained. The cholera first appeared at an inland village called Puebla de Rugat, which had only 1740 inhabitants. It is true this village was not very far from Valencia, but the cholera did not break out at Valencia. The opinion of the local medical practitioners, and of the doctor delegated by the governor of Valencia, concur in conjecturing that the outbreak was due to the removal of the soil of the village. The abundant rains during the winter had converted three of the principal streets into veritable quagmires. In the month of April the earth was dug up, and the streets and the public square of the village were laid out again, so that they might be level and more firm. On May 15th the cholera epidemic began in this village. It should be noted that the three streets where the earth was dug up and disturbed were precisely the streets which, during the epidemic of 1885, had most suffered from cholera. The authorities were so strongly impressed by these facts that they caused large trenches to be dug in these streets. The trenches were filled up with wood, large fires were lit, and the earth was thrown back upon the embers and thus baked. After the soil had been in this manner disinfected by heat the cases of cholera decreased both in number and in severity. But at the same time other measures were employed. The sick were sent to a special isolation hospital and their families were made to camp out at some distance from the village, while the houses they had inhabited were closed for ten days and disinfected. The epidemic ceased on June 23rd, and there had then been no less than 177 cases and 104 deaths. This is equal to a mortality of about 60 per cent. among the patients and of 7 per cent. on the total population. Puebla de Rugat is situated close to two rivers, tributaries of the Jucar and the Serpis. During the course of June the cholera spread to fourteen neighbouring towns and villages; but it was only towards the end of July that it reached the provinces of Alicante and Badajoz. It was conveyed to the latter province by reapers who came from the province of Valencia for the harvest. Then it travelled to the province of Toledo, to Murcia, and to the neighbourhood of Seville. The numbers of deaths attributed to cholera were, in the province of Valencia, 2214; Toledo, 362; Alicante, 278; Murcia, 232; Tarragona, 196; Seville, 180; Castellon, 86; Badajoz, 50; Albacete, 50. There were also a few cases in eleven other provinces, but in none were there more than twenty deaths. Puebla de Rugat, where the mischief began, is situated in a mountainous district right away from the coast, is not connected with Valencia by rail, and even the road is of a very inferior description. There was little or no traffic between Valencia and this village. It is difficult therefore to believe that the infection was imported afresh into Puebla de Rugat. A special commission, sent by the Government from Madrid, confirmed the opinion, already expressed by the local authorities, that the contagium had remained dormant in the soil ever since the epidemic of 1885. It is true that the eminent bacteriologist, Dr. Mendoza, failed to discover any comma bacilli in the soil, but he analysed the soil only after the process of disinfecting by the bonfires lit in the trenches, which had perhaps destroyed the bacilli. It appears also that Puebla de Rugat is built on a thin layer of sand, covering the top of hard, impermeable soil or rock. This seems to indicate that a shallow and very porous soil lying on an impermeable subsoil supplies the conditions which favour the development of the cholera contagium. Considering the slowness with which the epidemic of 1890 spread and the small number of victims it made, the question arises as to whether when the bacillus has sojourned for some years in the soil it has not lost a part of its former virulence. Dr. Hauser quotes the works of Hueppe and Wood in support of this theory, which tend to show that the comma bacillus has two modes of life, one where it is deprived of air, as in the intestine of a living being, and the other where it has air such as it obtains in a suitable soil. In the first case its products are more toxic, act with greater energy, but are much more readily destroyed, and it is then that disinfection is likely to be most effective. If, however, the bacillus is allowed to survive exposure to the air, it becomes more hardy and long-lived, but loses some of its virulence. This theory receives some confirmation, not merely from the experiments of the laboratory, but from the history of the Spanish cholera epidemic of 1890, when compared with that of 1885.

THE LANCET.

LONDON: SATURDAY, SEPTEMBER 12, 1891.

WE are glad to see that the recent decision of the Local Government Board, based on the report of its inspectors, Mr. HEDLEY and Dr. BRIDGES, who were commissioned to hold an inquiry into the alleged maladministration at the Eastern Hospitals, is receiving an amount of public attention which the case fully warrants. During the last few days *The Times*, as our readers may probably have noticed, has published several letters from persons fully competent to pass an opinion on the subject under discussion, and in a very able leading article on this matter has laid special emphasis on the fact that, if the complaints held by the commissioners to be proved were indeed founded on fact, the Board's inspectors themselves should share an equal responsibility for allowing such an unsatisfactory state of things to continue for so long a time without revision, and, as a matter of fact, without comment. Surely, if the position of a Local Government Board inspector be not a sinecure, some protest should have been raised before complaint was made from outside against the method pursued in so important a matter as disinfection, if that method be open to objection.

The system of disinfection carried out at the Eastern Hospitals has been in force for many years, and no objection having previously been raised, we may reasonably assume that its efficiency had been established to the satisfaction of the inspectors, and, moreover, that the responsibility for its continuance had passed from the hospital authorities. But the point which appears to us to be most surprising is the constitution of the court of inquiry, the anomaly consisting in the fact that the commissioners deputed to hold the inquiry consisted of the very inspectors, one of whose routine duties, at any rate, was to supervise the administration of which the efficiency has lately been called in question. As *The Times* remarks, it is no fault of Mr. HEDLEY or of Dr. BRIDGES that they are placed in this invidious position. It is the system which is at fault, and undoubtedly calls for reform. That a court should be so constituted that one of the defendants is called upon to sit in judgment on himself—for that is what it really amounts to—is an anachronism which is probably without parallel in any other Government department.

The instinct of self-protection is a strong one, and one which is deeply rooted in human nature. It would indeed be hardly surprising if the magnanimity, even of a special commissioner, were wholly proof against the tendency to lighten a personal responsibility by seeking to distribute a moiety of its weight on to other shoulders. But here the impartiality of the commissioners, if one may judge from the communication presumably founded on their report, is apparent. For, with the exception of a trivial matter in connexion with a dance, there is no single point of objection which can be taken in any way to reflect on Dr. COLLIE alone; but, on the contrary, those points which are held to be established are matters which obviously reflect in even greater degree on the inspectors themselves. This is well enough, but it is the official decision of the Local Government Board, of which, if carried out, Dr. COLLIE is to be the victim, which is so completely disproportionate, and which in the interests of common justice calls for reconsideration. The commissioners' report is, so far as we know, not published, but from the *précis* which has been received from the Local Government Board we gather that, although the charges have been for the most part found to be exaggerated or unfounded, certain allegations are held to be true.

These charges we have briefly summarised in a recent issue as follows:—1. That the dietary was too monotonous. 2. That dancing was permitted on a certain occasion in one of the wards. 3. That the disinfection was open to criticism.

We propose to deal with them in order:—

1. As to what constitutes a suitable diet for a convalescent fever patient opinions are by no means unanimous. On this point Dr. COLLIE'S own opinion should certainly carry weight, he having probably had a larger experience in the treatment of febrile disease than any man in the country. In this matter Dr. COLLIE is perfectly consistent. He has stated that in his opinion a diet which tended to stimulate the usually ravenous appetite present during convalescence from an acute fever is not only not necessary, but even unadvisable from the point of health; and that he prefers a diet which, though sufficiently nourishing, is not calculated to stimulate an appetite already equal to the physical requirements. That either fresh haddock or boiled mutton, which were the subjects of complaint, is unwholesome has not been, we believe, suggested. In the event of a patient being unable to take the diet by reason of a dislike to the nature of the food, Dr. COLLIE states that he has invariably ordered a change to be issued on the patient's representation; and this statement was not disputed at the inquiry. The main purpose of a diet sheet is to guide the steward in the issue of large quantities of food, and by no means implies that it may not be either altered or supplemented in special cases. The diet scale complained of had been in use in the hospital for many years, only modified by the omission of the more expensive forms of fish several months before this inquiry took place, the actual issue of which had been stopped during the time of Dr. COLLIE'S suspension for alleged extravagance in 1885. The above alteration in the sheet should doubtless have been made at the time when the issue was stopped; but if there had been any other cause for complaint, it is only reasonable to expect that it would have arrested the attention of the visiting inspector at one time or another.

2. That a dance amongst the nurses was held in one of the wards with Dr. COLLIE'S sanction appears to be the most trivial charge in the indictment. This has been referred to in almost hysterical terms by certain of the lay press, partly probably because its true proportions were not sufficiently realised, and partly owing to the fact that there exists a great deal of misconception in the lay mind on matters relating to the conditions of life in a hospital. It seems to have been a very innocent function, confined to the nurses themselves and to the children assembled to enjoy the Christmas tree.

From the opinion expressed by the Local Government Board as to the undesirability of holding a Christmas tree in a hospital ward we must express our dissent. The presence of really severe or dying cases in a ward would of course render such a function objectionable, but in the instance cited no such conditions seem to have obtained, and under such circumstances we are pleased to think that but few children's wards could be found in the London hospitals unprovided with their annual Christmas tree. The ward in question contained twenty-three patients, all of them convalescent, but the name of one patient seems to have been inadvertently left on the visiting list. This child unfortunately died three weeks later from diphtheria. During the festivity a case of mild scarlet fever was admitted into the ward. It can hardly be urged that dancing is a recognised cause of diphtheria, nor is it suggested that the case admitted during the evening was in any way prejudiced by the dancing. That the nurses should have been allowed to dance in the ward may be an error of judgment on Dr. COLLIE'S part, but the facts of the case certainly do not warrant the prominence accorded to them.

3. With reference to the method of disinfection pursued at the Eastern Hospitals, Dr. COLLIE has repeatedly expressed his distrust of chemical disinfectants *as applied*, and for many years has placed reliance on the more simple and, if properly carried out, more effectual agency of steam or boiling water and soap. In this belief he is supported by some of the highest authorities on the subject, and his own judgment, based on a very wide experience, lends additional weight to this view. It is beyond the capacity of one man, in addition to his many other duties, to personally superintend the daily disinfection of the linen and bedding of a large hospital, and if the methods or apparatus employed at Homerton were in any way unsatisfactory, why, again we ask, has it not, long ere this, been condemned by the Local Government inspector?

These, then, are the charges on which the Local Government Board states that it feels compelled to call on Dr. COLLIE for his resignation, thereby depriving him of his means of living. Special stress is laid on the fact that his reinstatement after his suspension in 1885 was only permitted on the distinct understanding that there must be no more complaints in the future. In 1885 Dr. COLLIE was made the scapegoat of a charge of extravagance over the greater part of which he had little or no control, and we certainly do not think that there is sufficient justification for this extreme action of the Local Government Board, viewed either in connexion with this or the former inquiry into the administration of the Eastern Hospitals. For more than twenty years Dr. COLLIE, as their senior medical officer, has filled the responsible position of medical adviser to the Metropolitan Asylums Board, and, at the same time, has been entrusted with the administration of the largest and most important of their institutions for the treatment of infectious disease. It was in great measure owing to his advice and forethought that the managers were enabled to successfully cope with the various epidemics of small-pox invading the metropolis, and in times of exceptional pressure it was to a large extent owing to his untiring energy that beds, often at the shortest possible notice, were found ready for the emergency. It was mainly owing to his representation that the old system of removing patients in the guardians' cabs was dispensed with, and the present system introduced. This was first started in connexion with the Eastern Hospitals under his supervision, and the extension of this principle has since been developed into the most complete ambulance system existent.

Dr. COLLIE was the first medical officer appointed to the *Atlas* when she was converted into a hospital ship, and was largely instrumental in initiating the present system of dealing with small-pox. He strongly recommended the removal of the *Atlas* from her then very undesirable moorings at Greenwich to a position lower down the river, such as she now occupies at Long Reach, a measure which was attended with benefit both to the health of the patients and to the neighbouring public. When it was finally decided to remove cases of acute small-pox out of London, it was at his suggestion that Sir EDMUND CURRIE carried out the method of removing patients by means of steamers. This river ambulance service has proved to be efficient in every respect. Dr. COLLIE has been in charge of the Eastern Fever Hospital since it was first opened in 1871, and at one time was, in addition, superintending the adjoining small-pox hospital and the hospital ships lying down the Thames, a distributed responsibility which necessarily involved a large amount of fatigue and anxiety. He was also for several months in charge of a temporary hospital at Plaistow, and at the same time superintended the transfer of patients down the river.

For a period of fifteen months Dr. COLLIE was also entrusted with the management of the North-Western Hospital at Hampstead, at a time when there was a large amount of hostile feeling among the residents on the subject of establishing an infectious hospital in their midst. He there instituted a code of regulations for the administration of fever hospitals, which were admirably adapted for the protection of the outside public, and which contain various provisions now accepted as a matter of course in other institutions of a similar kind. During the many years of his office Dr. COLLIE has occupied a position of great public responsibility, attended with constant anxiety, and often with considerable physical strain, and on the numerous occasions when he has been called upon to report on matters relating to the public health, his advice has been followed with obvious advantage. Although the decision of the Local Government Board in these matters is practically final, we are not disposed to believe that the managers of the Metropolitan Asylums Board, without the most strenuous opposition, will quietly permit one of their oldest and most trusted servants to fall a victim to a decree which to any unbiased person must savour a good deal more of political expediency than of judicial firmness. It is one which is calculated to inspire a feeling of distrust and no small amount of insecurity among other executive officers serving under the Local Government Board, some of whom, like Dr. COLLIE, have been holding a dangerous and responsible position for a good many years. The decision is one which calls for the most energetic protest on the part of the medical profession.

If the authorities of the Local Government Board, as we are unwilling to believe, cannot see their way

to reconsider the unfortunate decision with reference to Dr. COLLIE'S resignation, we can at least hope that the value of Dr. COLLIE'S many years' service may be recognised by the award of a substantial and adequate pension. Without laying too much stress on the sentimental aspect of the case, it is not indeed a cheering spectacle to see a man, the best part of whose life has been spent in a useful and dangerous branch of the public service, suddenly turned adrift in his declining years by a Government department whose decision has been mainly founded on matters of opinion.

THE report made for the year 1890 by the Inspector of Inebriate Retreats shows that the Acts under which these institutions are established have effected no small amount of good, and are growing in public favour in a manner that is highly satisfactory to the promoters of this very necessary piece of legislation. The total number of admissions has been 109, a figure of which the signficance is that it is the largest recorded since the Acts came into operation. It needs no proving, however, that the scale upon which the institution has been so far introduced is merely experimental, and corresponds, indeed, to what in physical science would be called a laboratory experiment. If the remedial effect of the treatment of inebriates is to be manifested in any sensible measure by society at large the admissions will need, as matters at present stand, to be numbered by hundreds or even by thousands, rather than by scores in the year. The hindrance to the more extensive application of this remedy to the terrible scourge of intemperance is, of course, to be found in the necessity of obtaining the patient's consent to his own confinement, a difficulty which is aggravated by the formalities of attestation of the patient's voluntary act of submission by two justices of the peace. We do not at this moment speak of the importance of safeguarding the liberty of the individual; but, considering only the hygienic aspect of the treatment, we do not hesitate to say that these conditions render the effective application of the remedy to a great social disease entirely out of the question. It cannot be expected that an inebriate, subject, as most inebriates are, to accesses of irresolution which destroy his power of will, should often prove to have sufficient firmness to pass satisfactorily through the ordeal of being examined by two justices of the peace as to the sincerity of his desire to consign himself to a retreat. While the existing regulations stand, it must in the nature of things be that this method of treating inebriety will be limited to a minimum number of cases, and those not of the most serious type. The inebriate who can help himself to the extent of forming and carrying out a resolution to enter a retreat, is far removed from the worst phase of subjection to the passion for alcohol. A suggestion which is strongly advocated in the present report is that magistrates, when dealing with drunkenness as a crime, should be authorised to substitute detention in a retreat for the penalties at present imposable. In reference to such cases, it will be felt that whatever difficulty may stand in the way of giving a general power to the magistrates to commit persons to custody for anything short of crime, the argument in favour of liberty cannot be urged in the cases now under consideration. There is no question that the drunkard who renders himself amenable to police law by his indulgence must be restrained, and the only question is whether the restraint should take the form of punitive or of remedial control. As yet, public opinion has not been educated up to the appreciation of the importance of the former type of interference with an individual's liberty; and society, which accepts punishments with all too little challenge, is excessively and punctiliously suspicious about remedies. But when the simple question is punishment or cure, it may be taken for granted that even the most saturnine of administrators would prefer the latter course. Why is it, then, that the system of commitment to retreats has not been tried for the benefit of criminal drunkards? Several reasons may be assigned in answer to such a question. In the first place, the position has probably never yet been realised by the public at large with sufficient clearness for the effective discussion of the question, and the suspicion to which we have referred of compulsory remedies has sufficed in the apathetic state of public sentiment to preclude the discussion, if it has not actually precluded the suggestion of such a course. But, furthermore, there is a difficulty of still more immediate practical importance in the fact that we have not at the present time any sufficient organisation for dealing with inebriates of this class. It is one of the most conspicuous shortcomings of the present system that it does not make any available provision for dealing with poor—that is to say, with pauper—patients. Before authorising justices to commit habitual drunkards to retreats, it would be necessary to provide adequate retreat accommodation, and to make provision for defraying the incidental expense. This is, no doubt, a matter which would demand and receive the most careful consideration in connexion with any legislation upon the lines that we are now discussing, and we are far from saying, therefore, that a new system can be inaugurated by a mere stroke of the pen. But the difficulties are difficulties of the kind which ought to be dealt with and removed, even if no question of dealing in this way with criminals were in the background. The method of retreat treatment ought to be available for poor patients no less than for such as are wealthy, and when this doctrine has been recognised and acted upon the practical objections to the remedial treatment of criminal drunkards will have disappeared. To this extent at least, then, it seems to us that the question of extending the system and introducing an element of compulsion can only be a question of the results attained in practice, and although the scale is at present, as we have said, experimental only, we think that the record exhibited by these reports is such as to justify a large confidence in the efficiency of well-directed efforts upon this system for the relief of those whose bane is the drink or the narcotic habit.

A MEMORANDUM has been issued by the President of the Local Government Board which indicates concisely the changes and amendments which have been effected by the passing of the Public Health (London) Act, 1891. The Act operates in two ways: it consolidates the metropolitan sanitary law, and it introduces a number of amendments and changes, some of which tend to assimilate the London

health laws with those of the country generally, whilst others deal with matters that are altogether new. Hitherto this branch of the law, in so far as the metropolis is concerned, has been scattered amongst some thirty-five statutes, but these are repealed, some altogether, and others in part, the new Act taking the place of all that is repealed. Many of the changes that have been made must operate beneficially. Under the clauses relating to nuisances, proceedings can be taken as to premises that are dangerous to health, without its being necessary as heretofore to prove the injury; and though appeal to quarter sessions is permissible, yet such appeals will be largely prevented by reason of the imposition of a daily penalty if the appeal is disallowed. An occupied house without a water-supply is also declared to be a nuisance; and besides this, the provisions of the Public Health Water Act are embodied in the London Act in so far as the prohibition to allow a new house to be occupied until it has a sufficient water-supply is concerned. The vestries, as sanitary authorities, must also make by-laws to secure the cleanliness of tanks, cisterns, &c. Provisions in many respects similar to those already applicable to bakehouses are extended to workshops, and it will now be possible to secure that the latter shall be periodically cleansed and that they shall be maintained in a proper sanitary condition. London scavenging is also materially affected by the Act. Failure to comply with a request for a scavenger can be punished by a fine, and whereas householders are at present compelled to remove snow from the pavement in front of their premises, this duty, and that of keeping the streets, including the footways, properly swept and cleansed, is imposed on the sanitary authority, who are liable to a fine in default. With regard to infectious diseases, the London hospitals will no longer be exempt from the duty of notification. Sanitary authorities are required, either alone or in combination with others, to provide proper premises, with apparatus and attendance, for the destruction of bedding, clothing, &c., and for disinfection; and the authorities are empowered to convey such articles and return them to their owners free of charge. A penalty of £10 is imposed on persons who, knowing themselves to be suffering from a dangerous infectious disease, engage in milking, fruit picking, and other allied occupations, and the law as to the conveyance of persons so suffering in public vehicles is amended and made more stringent. Mortuaries must also be provided, and, where the County Council requires it, buildings must also be maintained for the performance of post-mortem examinations. All the many vestries, district boards, &c., are for the purposes of the Act regarded as and styled sanitary authorities, and some security of tenure of office is provided for in the case of medical officers of health, who can only be removed with the consent of the Local Government Board. On the other hand, restrictions are imposed in the case of new appointments, which may in certain cases be somewhat irksome. A number of other subjects, such as smoke abatement and unsound food, are also dealt with; and in many matters which are not necessarily subject to special legislation by reason of the peculiarities of London administration, the laws of health affecting the metropolis are much more than they formerly were on the same footing as the corresponding law for the provinces. The new methods of procedure come into operation on Jan. 1st of next year, except in certain cases where by-laws are to be made. In these instances the date of the enactment and sanction of the new regulations will be the date of their coming into force; but a limit of time is put during which the power of making such by-laws will be vested in the authorities. The Act as a whole indicates a substantial advance in metropolitan public health matters, and though in certain respects it falls short of the reasonable anticipations of some who are most interested in the subject with which it deals, its operation can hardly be other than beneficial to Londoners and to those concerned in London sanitary administration.

THERE are few things which are more interesting, few which are better fitted to instruct while they humiliate, than an occasional retrospect of the fate which befalls new remedies or fresh measures which are ever and anon being introduced for the alleviation or cure of disease. Each has, as a rule, to pass through three distinct stages. The first is the stage of unreasoning enthusiasm, when much is said about "a sovereign balm" or "a great advance in therapeutics," and when a pitying contempt is expressed for antiquated methods hitherto in use. After a little time a second stage is reached. The natural swing of the pendulum has come, and disillusion and disenchantment, with the irritation which these processes beget in the too credulous, take the place of unlimited praise and fulsome adulation. It is now discovered that the hitherto vaunted remedy is not only useless, but that it is positively harmful, and the irrepressible antiquarian probably discovers that all the time we were dealing with one of the discarded measures of HIPPOCRATES. In some cases we hear no more of it; but not unfrequently there is a third stage, when it is found that, after all, there is something—it may be very little—in it, and a place of more or less permanence and importance is assigned to it, changed and modified, it may be, almost beyond recognition, in a recognised armamentarium.

The last few years have been very fruitful of such experiences. It is not so long since we were told, with all the gravity befitting the occasion, that sulphuretted hydrogen spelt "death" to the tubercle bacillus, and various kinds of apparatus, fearfully and wonderfully made, were contrived by means of which the death-dealing gas was to slaughter its thousands and tens of thousands. But this bubble soon burst; the bacillus came out of the ordeal unscathed, and now the treatment is seldom mentioned. There seems little likelihood that this measure will reach a third stage.

Two and a half years ago there was a stir in the realms of neurology. Suspension as a mode of treatment for locomotor ataxy and various other ailments was introduced. For weeks and months journals and magazines were flooded with recorded cases. Some observers were extravagantly hopeful, others were cautious and guarded, others openly scoffed and derided the new treatment. Various explanations were offered to account for its beneficial effects, until at length the second stage was reached, and there seemed to be an agreement that there

really were no beneficial effects to be accounted for. And now it may be said to have arrived at its third period—that of very much restricted usefulness, in which it is regarded only as a means of influencing impressionable patients, or, to use the current jargon of the day, of conferring whatever benefit it does merely by suggestion.

Another method of treatment which may now be regarded as entering on a third state is that of blood-letting. Fifty years ago bleeding was, it may be said, almost universal. The annual bleeding was then considered as necessary as the annual visit to the sea-side is nowadays. Then came the period of decline, when new physiological principles were being propounded, and when the confidence of new knowledge which accompanied this medical renaissance was strong enough to sweep away even this time-honoured custom. Yet it never wholly died out. It still lingered here and there, practised by someone strong in his convictions, or prejudiced against novelties, until in our own days it seems once more destined to attain to a position of importance; and if it does so, its use will no doubt be justified by an appeal to physiological laws and facts of which our fathers were ignorant.

But in the history of new remedies nothing is more remarkable than the wild welcome recently accorded to KOCH'S famous fluid, unless it be the unreasonable vituperation and abuse which has been more recently showered upon it. It is now in its stormy second stage, but already it seems as if we were beginning to catch sight of a glimmer of light beyond the darkness. Whatever may be the fate of tuberculin itself, its discovery has already stimulated inquiry along new lines, and it may be that the use of the much-discussed fluid will in the future be found to mark the first step towards a mode of treatment of infective disease, founded on a knowledge of germs and their products, which the labours of KOCH and his disciples have alone made possible. To quote from the interesting address delivered by Dr. LAUDER BRUNTON at Bournemouth, "KOCH'S tuberculin may yet fulfil the hopes of its able and single-minded discoverer."

Such are the slow and painful processes by which accurate knowledge is obtained. The progress, however, is ever upward; failure itself may but point the way to success, and the lesson which is ever being impressed upon us is to "prove all things, to hold fast that which is good."

Annotations.

"Ne quid nimis."

PROFESSOR CELLI ON THE INTERNATIONAL CONGRESS OF HYGIENE.

ITALY was not so fully represented at this great Congress as her place in the State system of Europe entitled her to be; the important provinces of Naples and Sicily, for example, sent no delegate. Her representatives, indeed, did not amount to a dozen, all told, yet for what she lacked in number she made up in distinction. To say nothing of Professors Corradi, Mosso, Fano, Sonsino, Pagliano, Pacchiotti, and Peroncito, all of them acknowledged masters in their special departments, she was particularly fortunate in her representative of the Roman municipality and university, Professor Angelo Celli. A working pathologist, whose researches in malaria have won him a European reputation, Dr. Celli, as director of the Istituto d'Igiene, as Member of the Consiglio Sanitario Provinciale, as Professor of Experimental Hygiene in the University, with which he combines a lectureship on sanitary police, was as favourable a specimen of the hygienic *savant* as the Italian kingdom could have produced. The report of the Congress, therefore, which he brings back to his compatriots has all the value of that of a "first-class witness," and, as given in the Roman *Tribuna* of Sept. 3rd, will be read with interest, not only by the public to which it is addressed, but also by that which, so to speak, comes by it at second hand. The admirable organisation of the Congress seems to have impressed Dr. Celli very favourably, exemplifying as it did the "nota practica degli Inglesi" in the most characteristic manner. From the arrangements themselves, he proceeds to review the work they were made to facilitate, and this he found to be worthy of all praise. "The hygiene of the citizen and the public charities of England," he says, "are quite two centuries ahead of ours." The causes of this he finds in the sense of citizenship so widely diffused throughout the United Kingdom—the community making itself responsible for practical results which, in other countries, are only expected from the State. Decentralisation and the consequent absence of all those bureaucratic checks and counter-checks which impair the efficiency of so many ably devised Continental systems—so symmetrical on paper, so poor in practice—enable England to work out her sanitary redemption in a way that excites the envy of the candid foreigner. From the Congress Dr. Celli made a tour in the provinces, and there he saw in operation the mechanism known to him, till then, only by description. He seems to have made a longer stay at Glasgow than at any other populous centre, and to have subjected its sanitary regulations, prophylactic and remedial, to a minute survey. These he recommends to his compatriots as deserving of careful study, particularly in the measures for combating infectious or contagious diseases, small-pox among the number. The facilities for public bathing attracted his special notice. "I found," he says, "the laundries and the peoples' baths maintained at the highest pitch of cleanliness; *ed a Roma, città delle Terme classiche, non abbiamo ancora un solo bagno publico!*" (and at Rome, the city of the classic *Thermæ*, we have as yet but one solitary public bath). The lodging-houses for the labouring poor, with their appropriate kitchens, baths, and reading-rooms, filled him with admiration, and draw from him a word of praise for their philanthropic promoters, Dr. J. B. Russell among others. The educational institutions, the facilities for detecting adulteration of food and drink, the elevation of the plumber's craft into an effective arm of the sanitary service, on all these he discourses to his countrymen with an earnestness and a true missionary spirit which cannot but have the best results upon them. Such testimony as he gives of the success of the Hygienic Congress is the most effective vindication of these international meetings, bringing zealous workers in the same field into sympathetic touch with each other, and accelerating the advance of those sciences on which the evolution of our common humanity depends.

HARVEST PROSPECTS: DEARTH AND SICKNESS.

DISEASE and an increased death-rate among the poor and needy are as certain to follow any considerable rise in the price of grain as the night is to follow the day. It means lessened sustenance for those who already have little enough to keep body and soul together, and this inevitably leads to lowered powers of resistance at a period of the year when

more vitality is needed. The continued rains, jeopardising the harvest, added to the prospect of an unfavourable yield over the larger portion of Europe, and little or no exportation from Russia, hold out the probability of a dear loaf in this country; for though America is equal to the demand—the harvest there being of more than usually good prospect—this will be at a higher price than could be commanded if the usual corn supplies of Europe were equal to the average. There is also a lowering of our export trade, and the home trade and finance of the country, we are told by our financial contemporaries, are in a less buoyant condition than they should be, so that the wage-earning classes are not likely to get full employ, thus giving them less purchasing powers to contend with the higher prices that are likely to prevail for the necessaries of life. Accordingly our charities in general, and hospitals in particular, have the prospect of a trying winter, with an increased demand and lessened resources. "To take time by the forelock" is an excellent proverb, and is one which the governors of all charitable institutions should begin to observe in order to prepare for the requirements of the coming winter. Poverty goes hand in hand with disease, and though the poor may be the first and most seriously affected, sickness does not confine itself to a class, but when widely spread among one section of the community is apt to assume an epidemic and contagious form, affecting the rich as well as the poor. No one can, therefore, be indifferent to warning without at the same time becoming unmindful of his own interest and that of those immediately dependent on him. Each in his way should be forearmed, and encourage others to be so likewise. We would forewarn the charitable that their resources are likely to be taxed to the utmost, and that it is not too early to begin to provide for this by searching in every channel for an increase to their means of charity.

CREMATION: A BOGUS OBJECTION.

WHATEVER we may say for or against the regular practice of cremation, it is a mere truism that the argument in its favour can rest securely upon the destructive purity of this process. Surely then we need not regard as a serious challenge to cremationists the suggestion of a correspondent that the smoke which first issues from the furnace is laden with infective matters. It is certain that by the time the body enters its proper chamber, life within the latter, whether for man or germ, has become an utter impossibility.

HOLIDAYS, HEALTHY AND UNHEALTHY.

WE occasionally need to be reminded of the silver lining which belongs to every cloud. Sometimes, too, there is profit in remembering that this is backed by a darker converse. Both aspects are combined in every complete picture. Life abounds in such illustrations. Let us take for example the following. For some years the children in most of our large cities have benefited by a species of assisted emigration to rural scenes, air, and mode of life carried out by means of different holiday funds. To them the change has brought a genuine gift of health, a boon which money cannot purchase, but their gain it appears has not been without some compensating loss incurred by their new associates among country children. A sanitary inspector writes to say that the germs of infectious diseases are often thus transferred from town to country; and, further, that the system of boarding out the children in their temporary village homes is a frequent cause of overcrowding, which must surely tend to defeat the very purpose of the rustic holiday. He advises, therefore, that every city child before leaving home should be called upon to show a clean bill of health as regards contagion, and that particular inquiries should be made as to the amount of accommodation available in the country lodging. These precautions are obviously most necessary and reasonable. At the same time it is well to be reminded that, though observed in the case of regular convalescent homes, they may easily be, and probably often are, overlooked under the cottage boarding arrangement. More than this, it is notorious that, even in the case of more wealthy families, the benefit derived from the annual holiday is often marred by similar neglect as regards infection. Local sanitary authorities should note this fact, and take measures for its appropriate treatment.

LEGISLATION AGAINST DRUNKENNESS IN GERMANY.

WE are glad to see that the Government of Germany is going to deal stringently in the way of legislation with drunkenness. It may well be that some of the clauses of the proposed Bill exceed in strength any that we could hope to pass in this country, where even a bishop has been known to prefer freedom to sobriety, as if drunkenness were consistent with freedom, or as if there were any more helpless slaves than the people who drink excessively. Those who criticise such measures are apt to forget that they are only meant to restrain such as are no law to themselves. One of the best clauses of the German Bill is the proposal to forbid the sale of liquor before eight in the morning and to persons visibly drunk. The difficulty is to get evidence in such cases as the last. Policemen should be able to say more on this subject than they do, and there is a very unpleasant idea abroad that there is too good an understanding between them and the publicans. Whatever the explanation, the fact remains that there is no proportion between the number of convictions for drunkenness and the conviction of publicans for supplying drink to persons so convicted.

INJURY TO THE THORACIC DUCT.

THE account of a patient who had suffered a fatal injury to the thoracic duct is given by Dr. Alvin Eyer in the *New York Medical Record* of Aug. 1st. The man, a railway brakesman, aged twenty-eight, was brought to hospital with the history of an injury to the trunk received on duty by being squeezed between a pole and ox-car. When first seen there was severe localised pain in the right lower chest, and a distinct band of discolouration about four inches in width encircling nearly the entire abdomen. There was considerable injury to the right arm. In twenty-four hours an attack of acute pneumonia developed and ran a severe course, the whole of the right lung being affected. On the second day there appeared a gaseous distension of the abdomen, with some dyspnœa, which remained more or less constant. On the seventeenth day he complained of pain, and there were found redness of skin and tenderness above and behind the right anterior superior iliac spine. Fluctuation was felt, and after the introduction of a grooved needle an opening was made, which gave exit to very offensive gas and ill-smelling discharge, "not unlike fæcal matter both in appearance and colour." The character of this changed, however, in a few days, becoming opaque and milky, increased in quantity on straining. The rapid emaciation and loss of odour in the discharge led to a diagnosis of lesion high up in the intestinal tract. Death supervened from starvation on the thirty-eighth day. At the post-mortem examination a post-pleural collection of fluid was found in the posterior and uppermost part of the thoracic cavity, identical with that which escaped from the fistula during life. The fistula was found in the thoracic duct within the opening formed by the diaphragm for the passage of the duct,

and the stream of chyle leaving it had been directed upwards and downwards by the arrangement of the muscle and fasciculi around the opening. Evidences of inflammation were found in the right lung, diaphragm, and in the structures immediately adjacent to its aortic opening. The post-pleural cavity referred to, the channel leading to it from the ruptured duct, and the upper two-thirds of the track leading through the extra-peritoneal tissues towards the opening in the abdominal wall were free from evidences of inflammation.

HOSPITAL TOUTING.

HOW shall we describe the conduct of a public institution which issues to medical men a note as follows: "As we are so sadly in want of funds . . . . . may I beg the favour of a small donation, if only 2*s.* 6*d.*; but should you not see your way to grant this request, may I in that case beg a few stamps, if only to defray the cost of this communication? Apologising for troubling you, and hoping to receive a favourable reply," &c. An appeal in these terms was lately sent forth by one of the special hospitals of the metropolis. Nothing truly could exceed its humility. The familiar tones of the mendicant are not usually reproduced in writing with such graphic fidelity. In curious contrast is the title of this institution, which bears with somewhat less than royal dignity the name of the "Queen's Jubilee" Hospital. Sad, indeed, and sadly general, is the want of funds in aid of medical charity, but sadder even than this is the fact that officials in charge of a public trust should so imperfectly understand what is due to their position and the work they have in hand as thus to tout and supplicate in the style of an ordinary begging letter. Labour is always worthy of its hire, and the good work done in our hospitals may likewise assert its title to consideration in a more worthy form than the above.

TREPHINING FOR CONVULSIONS.

TO the St. Bartholomew's Hospital Reports for last year Dr. Calvert and Mr. Berry have contributed a case of some interest. The patient was a child of nine years, who had been rendered unconscious by a fall, which bruised her head in the left parietal region, in June, 1888. Consciousness was recovered in half an hour, and with the exception of a little giddiness her condition was quite normal. On the next day she seemed quite well, but early on the following morning she had a fit, and fits continued to recur frequently, but they were slight, unattended with loss of consciousness, and limited to the right leg. In August, 1888, the right upper limb began to be involved in the convulsions, and about a year after the accident the face as well was affected. Rarely, however, did the convulsion spread to the left side of the body. On admission in March, 1890, nothing abnormal was discovered in the head; the fits were frequent, as many as 172 occurring in twenty-four hours, but varying in severity. The spasm usually began in the right index finger, spreading to the arm and leg of the same side. After several trials with bromide, which could only stop the fits at the expense of greatly depressing the patient, it was resolved to trephine, first over the arm centre. Nothing abnormal was discovered, except an unusual tendency of the brain to bulge. A similar negative result followed the removal of a second disc of bone over the leg area. That the correct areas were exposed was verified by the application of a weak faradaic current. After the operation the patient continued to have slight seizures, but with less frequency. On these threatening to become again very frequent small doses of bromide were exhibited, and these were continued, three grains thrice daily being given, with the result that no depression was produced, and the fits were so much reduced in number that during the three months from July to October she had had only ten slight fits in all. Although the patient cannot be described as cured by the operation, there seems little reason to doubt that she was materially benefited—as much, perhaps, as was to be expected considering the lapse of time between the accident and the operation.

THE GUINEA QUESTION.

THAT generous pound—the guinea—has often caused more trouble than it is worth. The petty worry and disagreement which in many cases have attended the transfer of the odd shilling have certainly no equivalent in so small a gain. Nevertheless they continue to fret and hamper the course of affairs. Now it is a grudging patient who withholds the silver of his fee, himself losing at the same time something both of grace and gratitude; now the nurse; or, as in a recent disputed instance, a coroner's officer, who claims from the practitioner this poor bloom upon the fruit of his labour. Right, of course, is always in such cases on the side of the latter. The tender of his full remuneration should first in every case be made to him. He may then at his option give or withhold the trifling perquisite. Under existing arrangements we can hardly expect to escape from the more than shillingsworth of vexation which the guinea frequently brings with it.

INFANT MORTALITY IN BELGIUM.

THE general mortality in Belgium is decreasing; infant mortality is increasing. The average general mortality in Belgium during the years 1869 to 1872 was 24·43 per 1000 of the population. The mortality during the years 1885 to 1888 was 20·25 per 1000, which is equal to a decrease of 4·18 per 1000, and represents, for a population of about 6,000,000, a saving of something like 25,000 lives per annum. While the improvement is thus well-marked and satisfactory the same cannot be said with respect to infant mortality. From 1869 to 1872, out of 1000 children born 148 died under one year of age. From 1885 to 1888 the proportion of infants, out of 1000 born, who died before they were one year old, had increased to 159. During this latter period 701,186 children were born in Belgium. Thus 7650 infants died who would have lived had the infant mortality not been greater than it was fifteen years previously. These figures, taken in conjunction with the fact that the general mortality of the population has decreased, show clearly that there is something especially wrong with respect to the rearing of infants. The medical and sanitary authorities in Belgium have taken the matter in hand. In the department of the Hainaut, for instance, a small official pamphlet has been issued by the Provincial Medical Commission, giving, in the simplest language, instructions as to the feeding and nursing of infants. This pamphlet, which is circulated broadcast, commences by insisting that midwives should employ the antiseptic method, and should teach the mothers how they are to watch over and protect the health of their children. A great number of homely and useful recommendations are given, and, of course, the commission insists on the necessity of mothers suckling their own children. To render this possible, the Medical Commission appeals to the administration for poor relief, to the societies for the protection of infancy, and to all similar and public-spirited institutions, to use all their resources and every endeavour so as to assist mothers in the fulfilment of "the holy duty" of suckling their children. Too often infants are abandoned to the care of a stranger while the mother returns to the factory or the workshop. But the wages these women workers earn are so small that it ought not to be difficult to obviate the necessity of their returning to work too soon. Of course, excessive infant mortality is and can be attributed to bad sanitary

conditions, to ignorance and carelessness in nursing. But though these defects prevail, and this to a large extent, yet there is less ignorance, and there is better sanitation, now than there was fifteen years ago. Nevertheless, the infant mortality has increased. This unfortunate result has, we should imagine, been brought about by the more extended breaking up of home life, through the mothers absenting themselves in order to work in factories &c. We would suggest to the reporters the importance of obtaining statistics as to the occupations of the mothers whose children die at an early age. The pamphlet before us is signed by the reporter, Dr. E. Schrevens; the president, Dr. L. Gallez; the secretary, Dr. J. Descamps of the Belgian Provincial Medical Commission. It is an excellent thing that instructions to mothers should be given under such responsible control. Official pamphlets of this description may do much to dissipate ignorant superstitions and practices which have cost the lives of many infants. But in the present instance something more is required. We repeat that ignorance and bad sanitation have not increased. The decrease of the general mortality proves that these evils have, on the contrary, been considerably reduced. If the infant mortality alone has increased, then there must be some very special cause that has come into existence recently that did not exist before, at least to the same extent. It does not, therefore, suffice to give general directions as to how infants are to be reared; but it is imperative to ascertain what is the new cause which has brought about the increased infant mortality.

NEWSPAPERS FOR HOSPITALS.

AN appeal for newspapers and periodicals on behalf of the Salford Union Hospital reminds us that the need of such mental provision is ever present in most of our sick wards throughout the country. We are well aware that this fact has not been overlooked by the friends of the poor, as every hospital library can testify. Still there is ample scope for its freer acknowledgment, especially as regards regularity in contribution. The interest afforded by books and magazines is in its nature more constant, and therefore more easily procurable, than that which is concerned with the fluctuating course of daily events. It is consequently with respect to this latter that some chronic difficulty remains. One day newspapers flow in abundantly, another they are conspicuously scarce. It would much relieve the tedium of sick and convalescent life in hospital if any persons who enjoy the daily luxury of morning or evening news, or who regularly take in a periodical, would after themselves using these literary advantages hand them on to the nearest medical charity. They might rest assured that their thoughtful kindness would not miss either its meed of appreciation or its healthy influence in aiding the progress of recovery.

THE ANATOMY OF THE URINARY BLADDER AND URETHRA.

DR. GRIFFITHS of Cambridge contributes a paper on this subject in the last number of the *Journal of Anatomy and Physiology*. He first gives a brief historical account, commencing with Galen, who appears to have made the earliest observations of any importance on the anatomy of that part of the urinary system, and who regarded the bladder as composed of a single membranous tunic made of longitudinal, transverse, and oblique fibres, and leaving around the neck a sphincter to prevent the constant escape of urine. Vieary divided this tunic into two layers. Fallopius and Vesalius described the fibres as muscular. Cowper wrote of *detrusor urinæ*. The observations of Cheselden, Spiegel, Ellis, Pettigrew, and MacAlister are referred to, and the author gives the results of his own dissections with the following conclusions:—"1. The muscular fibres of the wall of the bladder are collected into broad bands, two of which, from one to two inches in width, have an external longitudinal direction from the apex to the neck on the middle of the anterior and posterior surfaces. They are the *detrusor urinæ*, and form the 'external longitudinal coat.' The other bands, which form the greater part of the wall, have an oblique or transverse direction, crossing over and under one another, and often changing their direction; these, unlike the former, have no special point of attachment. 2. Each band is composed of anastomosing bundles of muscular fibres, and all the bands are connected with one another by means of intervening muscular fasciculi. All the bands thus connected act together harmoniously. 3. The *trigonum vesicæ* is formed by the innermost bands, the muscular fibres of which are closely and firmly bound together by fibrous connective tissue, the outer longitudinal band passing onwards to become lost in the neck without being incorporated, being, in short, separated from the trigone by loose areolar connective tissue. It is this arrangement that allows of the easy formation of the retro-uretral pouch in cases of long-standing difficulty in emptying the bladder, and especially if accompanied by retention. 4. There is no thickening of the so-called circular coat of the bladder at the neck to constitute an 'internal sphincter,' either in the male or female. 5. The striped muscle around the genital part of the urethra is developed especially in relation to the sexual function."

THE PREVENTION OF SCURVY.

JAMES HAVILAND, an English surgeon of repute, and a sketch of whose life and career appeared in THE LANCET of Dec. 11th, 1869, is credited with having devised a plan for the prevention of scurvy on board ship. He served first as a surgeon in the Indian Mercantile Marine, and when still in his twentieth year he accompanied a large number of soldiers and seamen on board the *Sir William Pulteney* to India. This was the only vessel of the squadron which arrived in port free from scurvy—a result which Mr. Haviland obtained by keeping up a full and fresh supply of mustard and cress, which he directed the crew to grow for their own use in warm, moist flannel. He lost not a single seaman or soldier—a service for which he received the thanks of the Board of Directors.

MEAT PASTE.

ACCORDING to the *Australian Trading World*, which is obviously a journal devoted to the interests of trade, the traffic in meat paste seems dying a natural death. This is attributed in a large measure to a certain "dead horse incident," and to public suspicion having been aroused as to what is put into the pot at the South American factories. Whilst admitting that legitimate manufacturers do all they can to secure sound beef and mutton for this purpose, the fact, the writer goes on to say, that horses abound on the Pampas of the Argentine Republic cannot be left out of sight, and, moreover, the most profitable use to which good, sound, wholesome horseflesh can be put is boiling down. The *Australian Trading World* regards meat paste as at best a nasty preparation, and if it were not for the pepper and spice the nastiness would be more apparent. Statements like these must be taken *cum grano salis*, especially when they appear in a journal which most likely exercises an influence in the financial world. Bearing this in mind the statement which follows comes as a natural sequence. The writer goes on to say that with these very evident (*sic*) arguments in favour of the natural and unsophisticated article it is no wonder that meat companies are beginning not to pay, and he sees no substantial

reason that such should pay in the future. There are some half dozen or so concerns, it is added, working beef or meat paste; but until the markets have gone through another cycle of over-supply in true meat, to use a practical phrase—until meat is down to 5*d.* or so a pound retail—there is no chance for these attenuated forms of food, with all their concomitant mysteries, to again come into favour with consumers. Arguments put forward merely on the strength of statements such as these will, of course, be accepted with the greatest reserve. Everyone believes that meat paste is inferior in many respects to the original article, but at the same time there is little doubt that it affords a convenient, useful, as well as palatable, form of food to many, and especially the poor. Scientific investigation is much needed on this important point, and a trustworthy means for the detection of foreign meat is greatly to be desired. Until this has been satisfactorily attained, the fate of preparations of this character is likely to remain still unforetold.

CHOLERA INTELLIGENCE.

CHOLERA is reported to be making serious advances in Syria. It has reached Aintab on the highway to Aleppo, and its rapid extension is believed to be associated with the immigration of destitute Russian Jews. The disease has fortunately disappeared from the Hedjaz. Cholera has also broken out amongst Chinese coolies on board a steamer bound for Singapore, and a few cases resulted in Singapore itself.

THE CELLS OF THE SPLEEN AND HÆMOGLOBIN.

DR. NICOLAI HOHLEIN publishes in his inaugural dissertation at the University of Dorpat a series of experiments made in continuation of the researches of Aug. Schwartz and Nicolai Hoffmann at the Physiological Institute of Dorpat. The former had shown that the protoplasm of various cells both destroys hæmoglobin and regenerates it, and Nicolai Hoffmann found in a hæmoglobin solution, which had been decolorised by spleen cells, an albuminoid; while the same solution, treated with hepatic cells, gave no albuminoid reaction. The author chose spleen cells, mixing them with three times their volume of diluted hæmoglobin solution. Decolorisation took place on the average after twelve hours, and the colour was completely recovered in from sixty to seventy hours. The author was then able to confirm the following conclusions Schwartz had arrived at. To regenerate a molecule of hæmoglobin it is necessary to bring it into contact both with the cells and the decolorised liquor. Regeneration occurs also when the decolorised liquor is brought into contact with fresh spleen cells, but in this case the colouring is not so vivid as when the same cells are used which caused the decolorisation. If the solution which has been decolorised by spleen cells is brought into contact with liver cells, all power of recolouring by the former is completely and irretrievably lost. The molecule of hæmoglobin is mechanically taken up by the cell which decomposes it, and during the period of complete decolorisation of the liquor within the cell it is regenerated. The author adds to these the following independent results of his experiments. In decolorisation, as well as in the process of regaining colour, the quantity of the hæmoglobin solution is of less importance than its concentration, as with a certain medium degree of the latter all effects of the spleen cells cease. Regenerated hæmoglobin is distinguished from the original by being decomposed with greater facility by acetic acid, by its bright colour and energetic oxidation. The albuminoid in the liquor which has been decolorised by spleen cells is cytoglobin. During the stage of decolorisation, as well as that of regaining the colour, a continuous new formation of cytoglobin is observed. This new formation of cytoglobin also takes place when the spleen cells are mixed with a 0·6 per cent. solution of chloride of sodium, but is in this case not so marked as when a solution of hæmoglobin is used. The hæmoglobin solution loses and the cells gain iron during the decolorisation of the former; the reverse process takes place when the solution regains its colour.

THE NOTIFICATION ACT AND THE LINCOLN TOWN COUNCIL.

THE Town Council of Lincoln have agreed, by thirteen votes to six, not to adopt the Notification of Infectious Diseases Act. It need scarcely be said that this decision was not arrived at on account of the conviction on the part of the Lincoln town councillors that the Act was calculated to affect the community injuriously. So far from that being the case, one councillor boldly confessed that "though he was prepared to support the adoption of the Act, yet, in the face of the feeling manifested by those attending the meeting, he thought he would be much to blame if he forced it upon his fellow citizens, and therefore he would vote against what he believed to be right." It would be hard to discover a better illustration of judgment overridden by prejudice than in this case. Misrepresentations of all kinds, stories of their children being kidnapped and removed from their homes to some infectious disease hospital, have been rife in the neighbourhood, and thus a beneficent Act, tending to the safety and wellbeing of all classes of the community, has been rejected by the "deliberative assembly" of the town. But this is not the first time in the history of Lincoln that wise sanitary counsels have been overridden by popular agitation. Nothing can more surely bring local self-government into contempt than such a submission to public clamour as has just been exhibited by the Lincoln Town Council.

"THE PATH OF DUTY."

HAPPILY for the reputation of mankind, acts of heroism, though always noble, are not so uncommon as we are apt to suppose. It is as if character in its development produced a constant, though smaller, series of the higher in addition to numerous lower and ordinary types. To the former group belong the mental and moral forms which distinguish great men and result in great actions. No quality, perhaps, is more truly natural in these than their unprofessedness, and the work which is to be immortal is often done quite simply and obscurely as a matter of everyday duty. Such unpretending but effective loyalty is well seen in conduct like that of Dr. Jaccottet, whose entire devotion to the suffering workmen under his charge on Mont Blanc has resulted in his early death. It were worse than needless to load with praise this fine example of unselfishness. It carries its own inseparable commendation. We may, however, allow ourselves the satisfaction of accepting it as a mark of honour conferred on the profession of which Dr. Jaccottet was a member. At the same time we can only regret that the fame of his heroic resolution was purchased at so great a cost.

A SANATORIUM FOR PHTHISIS IN MEXICO.

DR. BRENA of Zacatecas, Mexico, writes to us strongly recommending that city as a sanatorium for phthisical patients. He and several other medical men who have practised there for some years agree in declaring that they never see any cases of phthisis amongst people of the better classes who have lived for any great length of time in Zacatecas, the only cases which occur being either amongst

persons who have come from other localities, or amongst natives who are too poor to obtain the necessaries of life. The city is situated at the height of 2496 metres above the level of the sea. Its mean annual temperature varies from 12° to 14° C., there is only a small amount of rain, and the air is generally dry. The climate is bracing and stimulating; the winter is cold, but not exceedingly so. Invalids can, says Dr. Breña, almost always enjoy the open air during some part of the day. Patients in the first or even in the second stage of phthisis usually obtain great relief and frequently regain their health entirely. He does not, however, recommend that persons in whom the disease has reached an advanced stage should be sent there; but for those who do not suffer from diarrhœa and in whose lungs no cavities have as yet formed, he thinks that Zacatecas will be found even more suitable than Florida, Havana, Madeira, Minnesota, Pau, or many other places to which American and European physicians are in the habit of sending their phthisical patients.

THE DIETARY OF PAUPER LUNATICS IN IRISH ASYLUMS.

THE inmates of district asylums—or, perhaps, their friends—can hardly expect to be regaled with the luxuries of life, but surely they should not be debarred from what are usually called necessaries. On turning over some of the reports of the inspectors of lunatic asylums recently published in the annual report of Irish asylums we came across a description of the Omagh institution, which shows that the governors do not err on the side of extravagance. Except in the cases of the paying patients on the female side, no tablecloths, plates, cups, knives, or forks are supplied for the use of the patients, who are only allowed vessels of tin with spoons. In the most modern asylums every attempt is made to improve the habits of the insane by supplying as far as possible all those articles which will tend to foster habits of respect and control. Some of the patients to whom the inspectors spoke complained of their food, and one woman stated that during her nine years' residence at the asylum she had tasted neither butter nor an egg. It must not be forgotten that many of the insane suffer from a lowered vitality, others from rapid tissue waste, and such persons require, as pointed out by the inspectors, food elements rich in nutriment and easy of assimilation. If economy could be considered by itself the governors of the Omagh Asylum would deserve the highest encomiums, for they have succeeded in reducing their expenditure to a very low average, but, as the inspectors state, other considerations besides economy must be taken into account in the care and treatment of the insane, and they cannot express too strongly their opinion that the governors have pushed economy too far.

THROUGH the lamented death of Dr. H. G. Sutton, late Physician to the London Hospital, Dr. F. Charlewood Turner, formerly Assistant Physician, has succeeded to that post. At a quarterly and special Court of Governors held at the hospital on Wednesday, September 2nd, Mr. Fred. J. Smith, M.A., M.D., was unanimously elected Assistant Physician to the London Hospital.

ASHFORD, Kent, is reported to be the scene of an outbreak of small-pox, supposed to have been introduced by foreign rags imported for trade purposes. Leeds also is experiencing a yet more severe visitation. The Barmintofts small-pox hospital and the sanatorium in its vicinity are said to be nearly full of patients suffering from the disease. As yet no fatality has been announced.

THE Queen has been pleased, by Warrant under Her Majesty's Royal Sign Manual, to appoint David White Finlay, Esq., M.D., F.R.C.P., to be Professor of Practice of Medicine in the University of Aberdeen, in the room of Professor Smith-Shand, deceased.

A SURGICAL TRIBUTE TO THE LATE DR. WOOLDRIDGE.

BY W. ARBUTHNOT LANE, M.S.

IT came to my knowledge but a few weeks ago that our late lamented colleague, Dr. Wooldridge, had, shortly before his death, been making experiments on transfusion in animals, by means of which he was able to show that the usually accepted views as to the inutility of introducing saline solutions into the circulatory system to replace blood lost in severe hæmorrhage were absolutely false. He found that by the injection of a sufficiently large quantity of saline solution into the vessels of a dog which had lost enough blood to result in death he was able at once to restore the animal to activity and health. He thereby showed that after an animal had sustained a loss of blood sufficient to terminate its life, there was left in the blood vascular system enough hæmoglobin to sustain life, if only enough fluid be added to keep it in circulation.

Owing to his sudden death the results of his experiments were not published. I determined to apply his method to the first suitable case of severe hæmorrhage that might come under my care, regretting sincerely that I had not heard of it before. The following short account will show the perfectly successful adaptation of Dr. Wooldridge's experiment to the human subject, and will also indicate its very wide applicability to a number of conditions similar in character to that resulting from loss of blood which come frequently under the hands of the surgeon. It also cannot but add to the bitterness of the regret felt for the loss of one whose genius and brilliant originality furnished us with such powerful means of alleviating suffering and saving life, while at the same time it must also serve to shame such wrong-headed but occasionally well-intentioned and kindly people who style themselves anti-vivisectionists and attempt to hamper and oppose the efforts of such men as Wooldridge, who frequently sacrifice health, and sometimes life, for the good of their fellow creatures.

E. L——, aged thirteen, a delicate girl, had a very broad cleft, involving the soft palate and the greater portion of the hard palate. I operated on her on Sept. 2nd, at 1.30, and a considerable amount of blood was unavoidably lost during the operation. All bleeding had ceased before she was put back in bed; but, as she was much blanched, her dresser, Mr. Mackeson, watched her incessantly till 5.30, when he reported that up to that time there had been only such slight oozing as is not unusual after this operation. At 6 o'clock he sent for the house surgeon, as blood had begun to flow freely into the mouth. The wounds were carefully examined, when the oozing, which was found to be general, stopped readily on the application of ice. At 7.30 she vomited more than half a pint of blood. I saw her at 8 o'clock, when I found that there was no loss of blood. She was then very pale, with a rapid running pulse. As she began to bleed again at 11.30 I was sent for, and found her pulse very feeble and too rapid to count. She was then blanched and cold. Perchloride of iron and the cautery were rapidly applied to the cut surfaces, which had almost ceased to ooze. The pulse then failed, and the pulsation of the heart could not be felt. It became obvious that she had only a few minutes to live, so with as little delay as possible a nozzle was introduced into the basilic vein, and three and a half pints of a normal saline solution were introduced. The first pint appeared to make very little difference, but after that pulsation of the heart could be detected, then the pulse could be first felt, and then counted at about 160 or 180. The pulse gradually increased in fulness, and diminished in frequency till it was counted at 76 or 80. By this time the appearance of the child had changed in a marvellous manner. Her face from being pale, cold, and shrunken, had become more or less rosy, hot, full and moist, the tissues swelling up as a dry sponge does when placed in water. She was perfectly rational, and after

the operation slept well. During the twenty-four hours succeeding the operation the temperature was up for a degree or so, but no higher than would be accounted for by the application of the cautery and perchloride of iron to the raw surfaces. The urine was normal, contained no albumen, blood, or hæmoglobin. Its specific gravity was 1024. On the following day it contained a trace of hæmoglobin, and had a specific gravity of 1034. It was quite normal next day, and continued so. The pulse gradually decreased in rapidity, and her colour improved daily. The wounds also looked well, the edges of the flaps having united throughout. The anxiety which one felt during the injection was chiefly in reference to the asepticity of the fluids used. Fortunately, such precautions as we were able to take in the hurry of the moment proved sufficient. The gradual transition from the apparently moribund condition to that of apparent health was the most remarkable experience it has been my good fortune to witness. I trust that the publication of this case illustrating Dr. Wooldridge's method may help to save the lives of many who would otherwise certainly die. As he used to tell the students, in his lectures on physiology, "No person should die of hæmorrhage."

ARMY MEDICAL REPORT FOR 1889.

[SECOND NOTICE.]

IN our previous notice we considered that portion of the report dealing with the vital statistics and health of the Army stationed in the United Kingdom. We now propose to deal with the troops serving abroad—in India and our colonies. Taking these together, there was a total annual average strength in 1889 of nearly 200,000 British troops (it is really 199,715). The rates on this strength are: for admissions into hospital, 1006·9; for deaths, 9·17; 25·33 were sent home as invalids, 14·45 were discharged as invalids, and the constantly non-effective from sickness were 58·14 per 1000 of strength. The average sick time of each soldier was 21·32, and the average duration of each case of sickness 21·21 days respectively. Among the foreign stations, Cyprus show the smallest (1·34), and Ceylon (17·45), India, and Egypt the highest rates of mortality per 1000 during 1889. As we have said, however, the results contrast favourably with those for the previous ten-year period.

Turning to the health of the troops serving in the Mediterranean we find that at Gibraltar, with an average strength of 4761, there was an increase in all the ratios as compared with 1888, but a decrease as compared with the average ratios of the preceding ten years. Taking the sickness and mortality among the troops according to their service in the command, the ratios do not show any similarity to those of the preceding year, when there was a steady decline in the admission rate after the first year of service, whereas in 1889 there was a rise in the ratio of the third year of service. The mortality under one year's service in the command was 10·27, none among men in the second year of service, 3·11 in those of the third, and 7·52 per 1000 respectively, among men of still longer service in the command. There were 43 admissions and 9 deaths from enteric fever, being in the ratios of 9 and 1·89 per 1000 respectively. In Malta, with an average strength of 6516, the ratios for admissions, deaths, and invaliding show a slight rise above those for 1888, but a decrease in comparison with similar average rates for the preceding ten years. There is a somewhat noteworthy remark in reference to enteric fever—viz, that out of some 734 women and children only one of the former and no children contracted that disease, although the married quarters were either in or close to the barracks, the water-supply, food, &c., being the same. This would indicate, what is no doubt the fact, that soldiers more often than not contract their enteric fever outside the barracks. Notwithstanding that, the principal medical officer states that the general health of the troops was, on the whole, satisfactory during the year. He adds that there was a considerable amount of sickness in a regiment containing a number of young soldiers, which arrived in Malta in the month of July; and he judiciously remarks that no man under nineteen years of age should be sent to Malta, and that troops should arrive there in October and the succeeding four months. The excellent plan of placing half the troops under canvas during the summer months has been followed for several years at this station. At Cyprus the average strength was only 744. Only one death occurred during the year. There is nothing calling for special remark in regard to the sickness and mortality of the troops serving in Canada. There were no admissions there for enteric fever in 1889. Diseases of the respiratory system caused an admission rate of 33·8 per 1000, considerably below the quinquennial average rate. The garrison of Bermuda appears to have been healthy in 1889.

Turning to the troops quartered in Egypt, we find that the average strength in 1889 was 3431, the death-rate 12·24, the invaliding rate 35·85, and the constantly sick rate 60·45 per 1000. Cairo and Alexandria are the two principal stations in the command, and the force at the former is about double that at the latter (Alexandria). The ratio of mortality per 1000 was 14·43 at Cairo, against 5·54 at Alexandria. Under the head of eruptive fevers there were 42 admissions for small-pox and 6 deaths. The disease occurred principally among the men of the 1st battalion of the Welsh Regiment, a detachment of which was quartered at Assouan during part of 1888–89 in the course of an outbreak of small-pox among the native population, and two cases of the disease among the troops on the voyage from Assouan to Cairo. The Welsh Regiment was stationed in Kasr-el-Nil barracks near a crowded thoroughfare and on the banks of the river. Small-pox is always more or less prevalent in Egypt and among the natives at Cairo; there are no means of segregation, and patients affected with the disease often walk about in public.

As regards enteric fever, which is, *par excellence*, the disease to which young Europeans are subject in Egypt, there were 139 admissions and 14 deaths, being in the ratios of 40·5 and 4·08 per 1000 respectively. At Cairo the admissions for this disease numbered 109 with 12 deaths, whereas at Alexandria there were 26 admissions and 2 deaths. No fewer than 86 cases out of 129 came from different barrack rooms and blocks. The officers, women, and children were not exempted from attacks of enteric fever. Out of an average strength of 120 officers in Egypt in 1889 there were 7 cases of enteric fever and 41 of simple continued fever. Among the officers there were 3 deaths, 2 from enteric fever, 1 from apoplexy, and of 13 officers invalided 5 were from enteric fever. The principal medical officer reports that the general sanitary conditions under which the soldier is placed in Egypt are improving year by year. Notwithstanding the care, however, that may be taken to secure a fairly good hygienic condition of the soldier and his barracks, there are numerous insanitary conditions outside the barracks which are quite beyond the control of the military authorities.

In reviewing the report of the Sanitary Commissioner with the Government of India for 1889 we have anticipated much of what might now be said about the health of our troops serving in that country. There can be no doubt that the subject of the prevalence of enteric fever in India calls for very serious consideration. The amount of sickness, mortality, invaliding, and inefficiency which this disease entails on the European army is very great, and is increasing. The following table affords an excellent idea of the health statistics of the Army serving in the three Presidencies of India for 1889, as compared with the ten previous years. The average strength of the warrant officers, non-commissioned officers, and men in India was 68,545.

—	Ratio per 1000 of Mean Strength.					Average Sick Time to each Soldier.	Average Duration of each Case of Sickness.
	Admitted.	Died.	Invalided Home.	Invalids Discharged.	Constantly Sick.		
						Days.	Days.
Bengal	1534·1	16·56	24·47	12·69	88·92	32·46	21·16
Madras	1496·6	20·57	30·38	14·60	90·21	32·93	22·00
Bombay	1415·5	15·34	26·81	14·10	79·28	28·94	20·44
Total	1504·4	17·12	26·08	13·33	87·36	31·38	21·19
Ten years, 1879–88..	1509·9	16·36	29·76	14·41	69·51	25·37	16·80

The various reports contained in the appendix, embracing those on the Progress of Hygiene, Bacterial Cultivations in

persons who have come from other localities, or amongst natives who are too poor to obtain the necessaries of life. The city is situated at the height of 2496 metres above the level of the sea. Its mean annual temperature varies from 12° to 14° C., there is only a small amount of rain, and the air is generally dry. The climate is bracing and stimulating; the winter is cold, but not exceedingly so. Invalids can, says Dr. Breña, almost always enjoy the open air during some part of the day. Patients in the first or even in the second stage of phthisis usually obtain great relief and frequently regain their health entirely. He does not, however, recommend that persons in whom the disease has reached an advanced stage should be sent there; but for those who do not suffer from diarrhœa and in whose lungs no cavities have as yet formed, he thinks that Zacatecas will be found even more suitable than Florida, Havana, Madeira, Minnesota, Pau, or many other places to which American and European physicians are in the habit of sending their phthisical patients.

THE DIETARY OF PAUPER LUNATICS IN IRISH ASYLUMS.

THE inmates of district asylums—or, perhaps, their friends—can hardly expect to be regaled with the luxuries of life, but surely they should not be debarred from what are usually called necessaries. On turning over some of the reports of the inspectors of lunatic asylums recently published in the annual report of Irish asylums we came across a description of the Omagh institution, which shows that the governors do not err on the side of extravagance. Except in the cases of the paying patients on the female side, no tablecloths, plates, cups, knives, or forks are supplied for the use of the patients, who are only allowed vessels of tin with spoons. In the most modern asylums every attempt is made to improve the habits of the insane by supplying as far as possible all those articles which will tend to foster habits of respect and control. Some of the patients to whom the inspectors spoke complained of their food, and one woman stated that during her nine years' residence at the asylum she had tasted neither butter nor an egg. It must not be forgotten that many of the insane suffer from a lowered vitality, others from rapid tissue waste, and such persons require, as pointed out by the inspectors, food elements rich in nutriment and easy of assimilation. If economy could be considered by itself the governors of the Omagh Asylum would deserve the highest encomiums, for they have succeeded in reducing their expenditure to a very low average, but, as the inspectors state, other considerations besides economy must be taken into account in the care and treatment of the insane, and they cannot express too strongly their opinion that the governors have pushed economy too far.

THROUGH the lamented death of Dr. H. G. Sutton, late Physician to the London Hospital, Dr. F. Charlewood Turner, formerly Assistant Physician, has succeeded to that post. At a quarterly and special Court of Governors held at the hospital on Wednesday, September 2nd, Mr. Fred. J. Smith, M.A., M.D., was unanimously elected Assistant Physician to the London Hospital.

ASHFORD, Kent, is reported to be the scene of an outbreak of small-pox, supposed to have been introduced by foreign rags imported for trade purposes. Leeds also is experiencing a yet more severe visitation. The Barmintofts small-pox hospital and the sanatorium in its vicinity are said to be nearly full of patients suffering from the disease. As yet no fatality has been announced.

THE Queen has been pleased, by Warrant under Her Majesty's Royal Sign Manual, to appoint David White Finlay, Esq., M.D., F.R.C.P., to be Professor of Practice of Medicine in the University of Aberdeen, in the room of Professor Smith-Shand, deceased.

A SURGICAL TRIBUTE TO THE LATE DR. WOOLDRIDGE.

BY W. ARBUTHNOT LANE, M.S.

IT came to my knowledge but a few weeks ago that our late lamented colleague, Dr. Wooldridge, had, shortly before his death, been making experiments on transfusion in animals, by means of which he was able to show that the usually accepted views as to the inutility of introducing saline solutions into the circulatory system to replace blood lost in severe hæmorrhage were absolutely false. He found that by the injection of a sufficiently large quantity of saline solution into the vessels of a dog which had lost enough blood to result in death he was able at once to restore the animal to activity and health. He thereby showed that after an animal had sustained a loss of blood sufficient to terminate its life, there was left in the blood vascular system enough hæmoglobin to sustain life, if only enough fluid be added to keep it in circulation.

Owing to his sudden death the results of his experiments were not published. I determined to apply his method to the first suitable case of severe hæmorrhage that might come under my care, regretting sincerely that I had not heard of it before. The following short account will show the perfectly successful adaptation of Dr. Wooldridge's experiment to the human subject, and will also indicate its very wide applicability to a number of conditions similar in character to that resulting from loss of blood which come frequently under the hands of the surgeon. It also cannot but add to the bitterness of the regret felt for the loss of one whose genius and brilliant originality furnished us with such powerful means of alleviating suffering and saving life, while at the same time it must also serve to shame such wrong-headed but occasionally well-intentioned and kindly people who style themselves anti-vivisectionists and attempt to hamper and oppose the efforts of such men as Wooldridge, who frequently sacrifice health, and sometimes life, for the good of their fellow creatures.

E. L——, aged thirteen, a delicate girl, had a very broad cleft, involving the soft palate and the greater portion of the hard palate. I operated on her on Sept. 2nd, at 1.30, and a considerable amount of blood was unavoidably lost during the operation. All bleeding had ceased before she was put back in bed; but, as she was much blanched, her dresser, Mr. Mackeson, watched her incessantly till 5.30, when he reported that up to that time there had been only such slight oozing as is not unusual after this operation. At 6 o'clock he sent for the house surgeon, as blood had begun to flow freely into the mouth. The wounds were carefully examined, when the oozing, which was found to be general, stopped readily on the application of ice. At 7.30 she vomited more than half a pint of blood. I saw her at 8 o'clock, when I found that there was no loss of blood. She was then very pale, with a rapid running pulse. As she began to bleed again at 11.30 I was sent for, and found her pulse very feeble and too rapid to count. She was then blanched and cold. Perchloride of iron and the cautery were rapidly applied to the cut surfaces, which had almost ceased to ooze. The pulse then failed, and the pulsation of the heart could not be felt. It became obvious that she had only a few minutes to live, so with as little delay as possible a nozzle was introduced into the basilic vein, and three and a half pints of a normal saline solution were introduced. The first pint appeared to make very little difference, but after that pulsation of the heart could be detected, then the pulse could be first felt, and then counted at about 160 or 180. The pulse gradually increased in fulness, and diminished in frequency till it was counted at 76 or 80. By this time the appearance of the child had changed in a marvellous manner. Her face from being pale, cold, and shrunken, had become more or less rosy, hot, full and moist, the tissues swelling up as a dry sponge does when placed in water. She was perfectly rational, and after

the operation slept well. During the twenty-four hours succeeding the operation the temperature was up for a degree or so, but no higher than would be accounted for by the application of the cautery and perchloride of iron to the raw surfaces. The urine was normal, contained no albumen, blood, or hæmoglobin. Its specific gravity was 1024. On the following day it contained a trace of hæmoglobin, and had a specific gravity of 1034. It was quite normal next day, and continued so. The pulse gradually decreased in rapidity, and her colour improved daily. The wounds also looked well, the edges of the flaps having united throughout. The anxiety which one felt during the injection was chiefly in reference to the asepticity of the fluids used. Fortunately, such precautions as we were able to take in the hurry of the moment proved sufficient. The gradual transition from the apparently moribund condition to that of apparent health was the most remarkable experience it has been my good fortune to witness. I trust that the publication of this case illustrating Dr. Wooldridge's method may help to save the lives of many who would otherwise certainly die. As he used to tell the students, in his lectures on physiology, "No person should die of hæmorrhage."

ARMY MEDICAL REPORT FOR 1889.

[SECOND NOTICE.]

IN our previous notice we considered that portion of the report dealing with the vital statistics and health of the Army stationed in the United Kingdom. We now propose to deal with the troops serving abroad—in India and our colonies. Taking these together, there was a total annual average strength in 1889 of nearly 200,000 British troops (it is really 199,715). The rates on this strength are: for admissions into hospital, 1006·9; for deaths, 9·17; 25·33 were sent home as invalids, 14·45 were discharged as invalids, and the constantly non-effective from sickness were 58·14 per 1000 of strength. The average sick time of each soldier was 21·32, and the average duration of each case of sickness 21·21 days respectively. Among the foreign stations, Cyprus show the smallest (1·34), and Ceylon (17·45), India, and Egypt the highest rates of mortality per 1000 during 1889. As we have said, however, the results contrast favourably with those for the previous ten-year period.

Turning to the health of the troops serving in the Mediterranean we find that at Gibraltar, with an average strength of 4761, there was an increase in all the ratios as compared with 1888, but a decrease as compared with the average ratios of the preceding ten years. Taking the sickness and mortality among the troops according to their service in the command, the ratios do not show any similarity to those of the preceding year, when there was a steady decline in the admission rate after the first year of service, whereas in 1889 there was a rise in the ratio of the third year of service. The mortality under one year's service in the command was 10·27, none among men in the second year of service, 3·11 in those of the third, and 7·52 per 1000 respectively, among men of still longer service in the command. There were 43 admissions and 9 deaths from enteric fever, being in the ratios of 9 and 1·89 per 1000 respectively. In Malta, with an average strength of 6516, the ratios for admissions, deaths, and invaliding show a slight rise above those for 1888, but a decrease in comparison with similar average rates for the preceding ten years. There is a somewhat noteworthy remark in reference to enteric fever—viz., that out of some 734 women and children only one of the former and no children contracted that disease, although the married quarters were either in or close to the barracks, the water-supply, food, &c., being the same. This would indicate, what is no doubt the fact, that soldiers more often than not contract their enteric fever outside the barracks. Notwithstanding that, the principal medical officer states that the general health of the troops was, on the whole, satisfactory during the year. He adds that there was a considerable amount of sickness in a regiment containing a number of young soldiers, which arrived in Malta in the month of July; and he judiciously remarks that no man under nineteen years of age should be sent to Malta, and that troops should arrive there in October and the succeeding four months. The excellent plan of placing half the troops under canvas during the summer months has been followed for several years at this station. At Cyprus the average strength was only 744. Only one death occurred during the year. There is nothing calling for special remark in regard to the sickness and mortality of the troops serving in Canada. There were no admissions there for enteric fever in 1889. Diseases of the respiratory system caused an admission rate of 33·8 per 1000, considerably below the quinquennial average rate. The garrison of Bermuda appears to have been healthy in 1889.

Turning to the troops quartered in Egypt, we find that the average strength in 1889 was 3431, the death-rate 12·24, the invaliding rate 35·85, and the constantly sick rate 60·45 per 1000. Cairo and Alexandria are the two principal stations in the command, and the force at the former is about double that at the latter (Alexandria). The ratio of mortality per 1000 was 14·43 at Cairo, against 5·54 at Alexandria. Under the head of eruptive fevers there were 42 admissions for small-pox and 6 deaths. The disease occurred principally among the men of the 1st battalion of the Welsh Regiment, a detachment of which was quartered at Assouan during part of 1888–89 in the course of an outbreak of small-pox among the native population, and two cases of the disease among the troops on the voyage from Assouan to Cairo. The Welsh Regiment was stationed in Kasr-el-Nil barracks near a crowded thoroughfare and on the banks of the river. Small-pox is always more or less prevalent in Egypt and among the natives at Cairo; there are no means of segregation, and patients affected with the disease often walk about in public.

As regards enteric fever, which is, *par excellence*, the disease to which young Europeans are subject in Egypt, there were 139 admissions and 14 deaths, being in the ratios of 40·5 and 4·08 per 1000 respectively. At Cairo the admissions for this disease numbered 109 with 12 deaths, whereas at Alexandria there were 26 admissions and 2 deaths. No fewer than 86 cases out of 129 came from different barrack rooms and blocks. The officers, women, and children were not exempted from attacks of enteric fever. Out of an average strength of 120 officers in Egypt in 1889 there were 7 cases of enteric fever and 41 of simple continued fever. Among the officers there were 3 deaths, 2 from enteric fever, 1 from apoplexy, and of 13 officers invalided 5 were from enteric fever. The principal medical officer reports that the general sanitary conditions under which the soldier is placed in Egypt are improving year by year. Notwithstanding the care, however, that may be taken to secure a fairly good hygienic condition of the soldier and his barracks, there are numerous insanitary conditions outside the barracks which are quite beyond the control of the military authorities.

In reviewing the report of the Sanitary Commissioner with the Government of India for 1889 we have anticipated much of what might now be said about the health of our troops serving in that country. There can be no doubt that the subject of the prevalence of enteric fever in India calls for very serious consideration. The amount of sickness, mortality, invaliding, and inefficiency which this disease entails on the European army is very great, and is increasing. The following table affords an excellent idea of the health statistics of the Army serving in the three Presidencies of India for 1889, as compared with the ten previous years. The average strength of the warrant officers, non-commissioned officers, and men in India was 68,545.

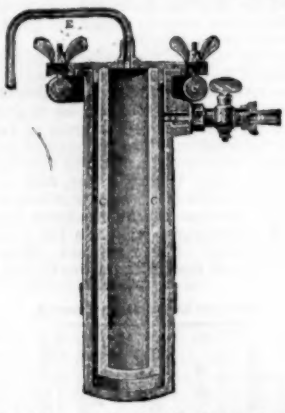
—	Ratio per 1000 of Mean Strength.					Average Sick Time to each Soldier.	Average Duration of each Case of Sickness.
	Admitted.	Died.	Invalided Home.	Invalids Discharged.	Constantly Sick.		
						Days.	Days.
Bengal	1534·1	16·56	24·47	12·09	88·02	32·46	21·16
Madras	1496·6	20·57	30·38	14·60	90·21	32·03	22·00
Bombay	1415·5	15·34	26·81	14·10	79·28	28·94	20·44
Total	1504·4	17·12	26·08	13·33	87·36	31·88	21·19
Ten years, 1879–88..	1500·9	16·36	29·76	14·41	69·51	25·37	16·80

The various reports contained in the appendix, embracing those on the Progress of Hygiene, Bacterial Cultivations in

Drinking Water. Reports from the Surgical and Medical divisions of the Royal Victoria Hospital for 1890, together with several papers of a professional character, still remain for consideration, and with these we hope to deal in a concluding paper.

THE BERKEFELD (KIESELGUHR) FILTER.

A VERY interesting and curious substance is kieselguhr. It consists, as is well known, of an infinite number of tiny skeletons of diatoms, and is composed chiefly of pure silica, with traces of the oxides of iron and aluminium. On account of its remarkable porosity, and its great absorptive power, this infusorial earth has been extensively used as a vehicle for many substances. Thus dynamite is kieselguhr, which has been soaked in liquid nitroglycerine, and certain disinfectant powders consist simply of kieselguhr containing a definite proportion of the liquid agent. Kieselguhr now promises to be of the utmost importance and value to the bacteriologist and the general community, inasmuch as it is stated that by its use as a filtering medium the complete removal of germs and all suspended matter from water may be secured. In fact, sterilisation of fluids by this means is said to have become a matter of easy accomplishment. The chief kieselguhr mines occur near Luneberg in Hanover, and Dr. Nordtmeyer of Breslau, whom we have interviewed on this subject, had his attention attracted some years back to the contrast between the clear bluish colour of the water in the mines and the yellow water of the immediate neighbourhood. This circumstance indicated to him the probable importance of diatomaceous deposit as a filtering medium. Endeavours were accordingly made to produce a suitable and satisfactory material for this purpose; but considerable difficulty was encountered in fashioning a fossil earth like kieselguhr into a solid, cohesive, and workable mass. After many laborious trials, Mr. W. Berkefeld of Celle succeeded only last year in producing a suitable material. The filter subsequently made was exhibited at the German Exhibition, where our attention was first directed to it. It was also shown to the members of the recent Hygienic Congress, where a paper was read upon the subject in the Bacteriological Section, by Dr. Proehnick of Vienna. As will be seen from the engraving, which represents a pattern well adapted for domestic use, the Berkefeld filter consists primarily of a



porous pot like those used in electrical batteries, constructed of kieselguhr. The filtering cylinder (C) is cemented into a metal headpiece (B), which is provided with an india-rubber ring, so as to form a watertight joint when pressed by means of a circular nut. The nut screws on outside B, against the top of the metal cover, through which the delivery pipe (E) passes. The pressure of the water inside the cover helps to make this joint tight. The water enters at D, and the filtered water escapes through E, the pressure of an ordinary town supply being ample to force it through the kieselguhr cylinder at such a rate as is convenient for all domestic purposes. By means of the head screws (A A) the cover may be removed and the cylinder taken out, and the surface brushed from time to time. This not only serves to detach any accumulated filth, but from the crisp nature of the material a film of dead surface is also removed, and a fresh one exposed. In one form of filter a mechanical arrangement is provided by which this cleaning is accomplished. It consists of two Loofah brushes surrounding the cylinder, connected with a spindle, which is turned by a handle from the outside. A tap, not shown in the engraving, is provided at the lower end of the filter, whereby dirty water may be run off, and to allow a rapid stream of water to run over the filtering surface before using. The filtering cylinder, or "candle," as it is called, may be made to work by itself. By merely immersing the kieselguhr candle in an ordinary cistern, and connecting it with a glass tube about six feet long, syphon-fashion, moderately quick filtration proceeds. The rate of filtration of course will depend upon the length of the syphon limb, but in the experiment we made the water was delivered in large drops quickly following upon each other. Obviously a reservoir could be used to store the filtered water so obtained. Simple filters are made similar in construction to those in which a block of animal charcoal as a medium is employed. The water in an upper glass chamber surrounds a kieselguhr candle, through which it passes, falling drop by drop into a reservoir below. The Berkefeld Filter Company, of 70, Mark-lane, make many modifications in the style and pattern of their filter, according to requirements. The filter for tourists and others is worthy of mention. It consists simply of a kieselguhr candle, a bottle provided with a cork fitted with a double tube, and a small air syringe. The candle is immersed in the water and connected by means of rubber tubing with the bottle, which is then exhausted by the air syringe. In this way, the bottle soon fills with water rendered perfectly free from germs and suspended matter. This portable form could also be used with the greatest ease for the clarification of decoctions and chemical solutions.

We have put the kieselguhr filter through many rigid tests. First, it was thought desirable to ascertain how efficiently the kieselguhr candle removed suspended matter. For this purpose freshly precipitated barium sulphate and oxalate of lime, two very finely divided substances and extremely difficult to filter under ordinary circumstances, were used. In both instances a perfectly clear filtrate resulted. Ultramarine suspended in water in a very finely divided state was next tried. The filtrate was quite bright and clear. This result is particularly remarkable, as it is held that ultramarine is quite as difficult to filter satisfactorily as water containing bacteria. Then, with the view of determining how effectual kieselguhr is in removing organisms, a strong decoction of hay swarming with bacteria was drawn through. The filtrate was bright and clear, and according to the microscope did not contain a single organism. The clear filtrate placed in a sterilised test-tube plugged with cotton-wool showed no signs of bacterial growth even after several days. When no such precautions were taken the clear filtrate left freely exposed to the air gradually became turbid, and the microscope showed it to be teeming with bacteria. The cylinder, after cleaning, was next immersed in fresh cow's milk, and exhausted with the vacuum pump. After some time, and when the fat had been repeatedly brushed off the external walls, a perfectly clear and colourless milk serum, free from fat, was obtained. The rate of filtration was increased when the milk was diluted with its own bulk of water. The serum gave all the reactions for milk sugar, and possessed a peculiar sweetish taste. Dr. H. Bitter of Breslau, who has made many interesting experiments with this filter, states that it is most effectual in yielding, with frequent brushing, a clear blood serum, free from microbes. With proper care, he says, it is easy to get in an hour at least 1000 cc. of clear germ-free serum. It is an obvious advantage that this filter will undergo heating to 100° C. in water for three-quarters of an hour without detriment, and can thus be made, if needed, absolutely sterile. This sterilisation of fluids by mere and comparatively rapid filtration must be regarded as a distinct and important advance in bacteriological science; for with this filter, as might be gathered from our own observations, the filtration of cultures in liquid nourishing substrata, in order to isolate the products of matter charged by organisms, may be effected in a short time in almost any quantity with little trouble. We have not obtained the slightest evidence which would enable us to contest any of the statements made in regard to the

advantages possessed by this filter made of kieselguhr. The microscope shows this substance to consist of a great number of exceedingly fine pores, and these pores are surrounded and overlaid by a network of small ladder-like diatoms, which are interlaid in such a manner that complete retention of the smallest particles is secured. Thus it is that the kieselguhr filter is able to yield large quantities of filtered liquid. With a water pressure of 45 lb. to 50 lb., such as exists in the ordinary mains, a single kieselguhr cylinder will yield 750 gallons in twenty-four hours, the water so obtained being absolutely free from solid particles and devoid of organisms. In addition to this, the filtering medium may not only be easily cleansed, but by the same operation a thin film of the surface is removed and a new one exposed, so that clogging is avoided, and the filtering capacity but little impaired.

MEDICAL OFFICERS OF HEALTH AND THE LOCAL GOVERNMENT BOARD.

AT the meeting of St. Luke's (Middlesex) vestry in their hall, City-road, on Tuesday, Mr. Churchwarden Guffin in the chair, a discussion arose on the stipend paid to and the duties performed by their medical officer of health, some of the members objecting to his retention of several other professional appointments which he holds in the district. The following letter was read from Mr. Dalton, the Assistant Secretary of the authorities at Whitehall:—"I am directed by the Local Government Board to advert to your letter of the 17th June last, from which it appears that it is proposed that the medical officer of health, who has been appointed by the vestry of the parish of St. Luke's, should be allowed also to continue in the office of medical officer of the City-road Workhouse, public vaccinator for the St. Luke's district, surgeon to the Lying-in Hospital, City-road, and at the same time to practise as a consulting surgeon and physician. The Board direct me to point out that the arrangement which is contemplated as regards the medical officer of health must necessarily result in a considerable portion of his time being devoted to duties other than those which would devolve on him as an officer of the vestry, and to state that they are of opinion that it is very desirable that the vestry should secure the whole time of an efficient medical officer of health, devoted to its sanitary improvement. The Board may observe that the Board of Works for the St. Giles's district—a district of which the circumstances are in many respects parallel to those of St. Luke's—have appointed a medical officer of health at a salary of £600 per annum, with the condition that he should devote his whole time to his duties. The Board had no doubt that such an expenditure in securing the efficiency of sanitary administration will, from every point of view, be attended with advantage to the district. The Board direct me to request that the vestry will be so good as to give the subject their further consideration."

The Vestry Clerk, in reply to a member, said that the present stipend of their medical officer was £400 a year, his acceptance of this sum being conditional on the vestry agreeing to his retention of the other offices mentioned in the letter from the Local Government Board. He received an advance of £50 some time ago under the Notification of Infectious Diseases Act.

Mr. Enos Howes, in proposing that the communication from the Local Government Board be sent to the Sanitary Committee for consideration, remarked that year by year, *pari passu* with the demolition of whole streets of dwelling-houses, to be replaced by warehouses and offices, and the complete transformation of the residential character of the parish, there was less sanitary work for their medical officer, who had ably performed his duties, and consequently no urgency for adopting the suggestion of the Local Government Board and incurring an additional yearly outlay.—Mr. Hewlett seconded the resolution, which was adopted by the vestry.

MEDICAL DEFENCE UNION, LIMITED.

A COUNCIL MEETING was held at the registered offices, Birmingham, on August 20th, Mr. Lawson Tait in the chair, and the following is an epitome of the business transacted.

The applications from fifty-seven new members were accepted. In the application of a Scotch member threatened with a libel action for expressing his opinion that a club member was loafing and malingering, it was decided to instruct solicitors to defend. In the application from a member in Staffordshire, based upon the circulation of statements in a quack pamphlet reflecting upon his professional ability, it was resolved, "That the solicitors be instructed to take proceedings with the utmost rigour against the publisher, printer, or circulator, or all of these." Two applications of a debt-collecting character were refused. The action of the secretaries was confirmed in (1) threatening to report a surgeon for newspaper advertising; (2) in requesting apology and payment of a donation to a hospital by a man who circulated a serious libel against a member. The secretaries were directed to report a practitioner to the Medical Council for newspaper advertising. The prosecution under the Medical Act, and under the Apothecaries Act of an unqualified practitioner in Worcestershire, who held club and other appointments, was unanimously authorised. It was moved by Mr. Lawson Tait, seconded by Dr. Leslie Phillips, and resolved, "That in accordance with Article 45 Caleb Charles Whitefoord be excluded from membership of the Union"—the secretary reporting that this man had been condemned to five years' penal servitude for abortion mongering, that he had applied to the Union for assistance in his defence, and that that application had, with the approval of the metropolitan branch, been refused. The organising secretary (Dr. Leslie Phillips) reported that he had effected a fidelity guarantee policy for £200 on the name of the clerk. He also reported that he had summoned and attended a meeting of the profession of the four North of England counties at Newcastle under the presidency of Dr. Philipson, and that an important branch of the Union had then been formed, also that a branch for Dorset and West Hants had been formed during the Bournemouth meeting. The thanks of the meeting were given to the Council of the University of Durham College of Medicine for the use of their council chamber, and also to the Bournemouth local branch of the British Medical Association. The secretary reported that the woman who persecuted a medical practitioner by anonymous letter writing had been successfully convicted (by the action of the Union) at the last Durham Assizes. Dr. Leslie Phillips reported that the rapid growth of the Union had rendered many of the Articles of Association unworkable, and expressed his opinion that for the easy carrying on of the work of the Union a reconsideration of many of its by-laws was essential; for example, twenty days only was allowed for the preparation of annual reports, auditing, printing of reports, and list of members, at a time when all business matters were largely dislocated. All companies knew that January was the very worst month for annual meetings. The present machinery for the authorisation of prosecutions of irregular practitioners was costly and cumbersome. The collection of arrears, the desirability of having power to refuse admission to notorious black sheep, the conduct of branches and other matters, required specifically defining. A committee of nine was appointed to consider and report on the subject.

Public Health and Poor Law.

LOCAL GOVERNMENT DEPARTMENT.

REPORTS OF MEDICAL OFFICERS OF HEALTH.

Marylebone.—Mr. Wynter Blyth, in his summary for 1890 of the sanitary chronicles of Marylebone, gives an account of the more important matters affecting the public health, and of the work done by the sanitary department. Amongst the improvements in progress is the extension of such preparatory measures as are necessary for a constant supply of water; new regulations as to houses let in lodgings, and with respect to house drainage, have also been adopted. A full and useful account is given in the report of the year's legislation in so far as it affects the Marylebone Sanitary Department, and it is stated that out of a thousand notices issued it was only necessary to take proceedings in twenty-four instances. A number of tables, and a statement of the prevailing meteorological conditions, are also included in the report.

St. Helens Urban District.—Mr. Robert McNicoll has to record a severe epidemic of scarlet fever during 1890, by

means of which the rate of mortality rose to 24·5 per 1000. The cases heard of numbered 1234, of which 181 proved fatal. The exclusion of children from schools who came from infected houses is regarded as an insufficient measure, but judging by the school closure during holiday periods, this more complete restriction was more successful. But this preventive was adopted in a half-hearted sort of way, which is the more unfortunate because its success always depends on its completeness. Much seems to be needed in St. Helens for the prevention of infectious diseases. Such a district cannot pretend to do much under its present arrangements. Thus, over 70,000 people of the St. Helens class are provided with only fourteen beds for the isolation of infectious diseases, apart from four beds placed just where they ought not to be—namely, in the administrative block of a so-called isolation hospital. But even with this insufficient accommodation some substantial good is evidently done. Mr. McNicoll gives some excellent statistical information as to the borough, and he appends a series of useful tables.

Friern Barnet Urban District.—This district had scarlet fever in 1890, and measures of school restriction were loyally carried out, and would have succeeded had it not been for the absence of means of isolation, which was keenly felt. The district appears to be under good sanitary supervision, but, in addition to its need of a hospital, its more prominent wants include a constant water-supply, a disinfecting apparatus, and a mortuary. Mr. Hugh Stott gives the death-rate for last year as 13·6 per 1000.

Lowestoft Urban District.—In a population of some 23,890, the death-rate for Lowestoft during 1890 is reckoned by Dr. Wynne as 16·2 per 1000, the excess over previous years being attributed to influenza. The returns of sickness show 64 attacks from typhoid fever, and in such a district this matter naturally receives a good deal of comment. The attacks were associated with common privies, often so placed as to necessitate nuisance, blocked sewers, faulty drain arrangements, and such like removable causes of mischief. Indeed, it will astonish those who know that Lowestoft is a place which is resorted to for health to learn that out of 5464 houses some 4000 have common privies, a number of which are a distinct source of danger. "Excrement nuisances," it is admitted, are the cause of this preventable disease in this health-resort, and Dr. Wynne serves the best interest of the place by expressing his views strongly on the subject. The efforts made to prevent spread of the disease were happily in most cases successful, but the isolation hospital is unfitted for the requirements of the place. Lowestoft seems, in short, to have energetic sanitary officials, but marked standing defects prevent the proper success of their labours. Indeed, as explained, the place is being transformed from a country village into a large town—a transformation which needs exceptional care and a liberal sanitary administration.

Bridlington Urban District.—Mr. Wetwan gives the death-rate for last year as 19·2 per 1000; in Bridlington Quay it was 13·9, in Bridlington proper no less than 21·2. Much needs doing in the way of the removal of bad dwelling accommodation. The report is largely statistical, but there is an account of current sanitary work of the ordinary character by the town surveyor and the sanitary inspector.

Droitwich Rural District.—The report on this district has been prepared with care by Dr. H. Swete, who has, for the purposes of the County Council, included some valuable descriptive matter. The general death-rate was 14·6 and the zymotic rate 0·7 per 1000. The provision of a permanent hospital is again strongly advocated, and this the more since notification has come into operation. Systematic inspection is maintained, and the various portions of the work are referred to under different headings; this being followed by a separate account of each parish. The pollution of the Stour is also referred to, and it is pointed out that this district takes a large share in fouling the stream. The report contains much that will be valuable for local administrative purposes.

Portsmouth Urban District.—During 1890 the general death-rate for Portsmouth was 20·0 per 1000, a slight increase above the annual average, being due to the influenza epidemic. The year also witnessed the continuance, but fortunately also the end, of a maintained prevalence of scarlatina; and diphtheria was more than usually prevalent, 212 cases having come under notice. This latter disease seemed to have been associated with residence in dwellings built upon land befouled by town refuse. This indicates failure properly to deal with such refuse, and the probable absence of a by-law requiring the concreting of the entire surface of the sites of domestic buildings. Diarrhœa was not so prevalent as usual; but Dr. Mumby has been studying this subject, and his experiments are stated on the whole to confirm Dr. Ballard's views as to the condition of a soil temperature at four feet deep of 56° Fahr. in favouring diarrhœa, and of rainfall in preventing the occurrence of the disease. Another year's experience of the Notification Act is to the effect that it has enabled the sanitary department to carry out an immense amount of valuable work. The local isolation hospital was also more useful than in any previous year. A chart shows the distribution of some of the infectious fevers. If the question of expense were no bar, it would be much more useful to have a separate hospital for each disease, instead of mingling all the diseases together in one.

Derby Urban District.—This county borough can at last boast that it possesses a modern and efficient isolation hospital, and Mr. W. Iliffe gives a full account of it, and illustrates it by two engravings. It has already done excellent and useful work, and it is likely to attract a class who were deterred by the old building hurriedly erected in a small-pox panic. The death-rate last year was 18·5 per 1000. Amongst the so-called zymotic diseases measles and whooping-cough were the most fatal, and this probably accounts for some excess in the rate of death amongst infants; there was also a milk-scarlatina prevalence due to infection arising outside the borough. Unfortunately, as in many large towns, diphtheria tends to increase in Derby; the actual cause of the prevalence was obscure, but it was not found to be in any important measure due to infection at school. A full account of the current sanitary work in progress is embodied in the report; and the report of the sanitary inspector is appended.

VITAL STATISTICS.

HEALTH OF ENGLISH TOWNS.

IN twenty-eight of the largest English towns 5651 births and 3264 deaths were registered during the week ending Aug. 29th. The annual rate of mortality in these towns, which had declined in the preceding four weeks from 19·6 to 18·0 per 1000, was 18·1 in the week under notice. The rate was 17·3 in London and 18·7 in the twenty-seven provincial towns. During the past eight weeks of the current quarter the death-rate in the twenty-eight towns averaged 18·2 per 1000, and was considerably below the mean rate in the corresponding periods of the ten years 1881–90. The lowest rates in these towns were 10·0 in Halifax, 11·3 in Norwich, 13·1 in Brighton, and 13·6 in Bristol and in Birkenhead; the highest rates were 25·2 in Wolverhampton, 25·9 in Plymouth, 26·6 in Sunderland, and 28·5 in Preston. The deaths referred to the principal zymotic diseases, which had declined in the preceding four weeks from 653 to 564, further fell to 552; they included 335 from diarrhœa, 85 from whooping-cough, 40 from "fever" (principally enteric), 33 from measles, 30 from scarlet fever, 28 from diphtheria, and one from small-pox. The number of scarlet fever patients in the Metropolitan Asylum Hospitals and in the London Fever Hospital at the end of the week was 967, against 924 and 922 at the end of the previous two weeks; the patients admitted during the week were 110, against 104 in each of the preceding two weeks. The deaths referred to diseases of the respiratory organs in London, which had declined from 191 to 157 in the previous three weeks, further fell to 150, and were 27 below the corrected average.

In twenty-eight of the largest English towns 5736 births and 3038 deaths were registered during the week ending Sept. 5th. The annual rate of mortality in these towns, which had been 18·0 and 18·1 per 1000 in the preceding two weeks, declined to 16·8 last week. The rate was 16·0 in London and 17·5 in the twenty-seven provincial towns. During the past nine weeks of the current quarter the death-rate in the twenty-eight towns averaged 18·0 per 1000, and was considerably below the mean rate in the corresponding periods of the ten years 1881–90. The lowest rates in these towns last week were 11·3 in Nottingham, 11·7 in Portsmouth, 13·1 in Brighton, and 14·6 in Bristol; the highest rates were 20·9 in Newcastle-upon-Tyne, 21·2 in Liverpool, 22·5 in Blackburn, and 27·5 in Preston. The deaths referred to the principal zymotic diseases, which had declined in the preceding five weeks from 653 to 552, further fell last week to 485; they included 302 from diarrhœa, 64 from whooping-

cough, 34 from "fever" (principally enteric), 34 from diphtheria, 27 from scarlet fever, 24 from measles, and not one from small-pox. The lowest death-rates from these diseases were recorded in Oldham, Halifax, Bolton, and Derby; and the highest in Leicester, Preston, Sunderland, and Plymouth. The greatest mortality from measles and from whooping-cough occurred in Plymouth; and from diarrhœa in Blackburn, Sheffield, Birkenhead, Salford, Newcastle-upon-Tyne, Leicester, Sunderland, Plymouth, and Preston. The mortality from scarlet fever and from "fever" showed no marked excess in any of the twenty-eight towns. The 34 fatal cases of diphtheria included 24 in London, 3 in Liverpool, and 2 in Manchester. No death from small-pox was registered in any of the twenty-eight towns; no small-pox patients were under treatment in the Metropolitan Asylum Hospitals, and 2 in the Highgate Small-pox Hospital on Saturday last. The number of scarlet fever patients in the Metropolitan Asylum Hospitals and in the London Fever Hospital at the end of the week was 947, against 922 and 967 at the end of the preceding two weeks; the patients admitted during the week were 97, against 104 and 110 in the previous two weeks. The deaths referred to diseases of the respiratory organs in London, which had declined from 191 to 150 in the preceding four weeks, rose again to 155 last week, but were 11 above the average. The causes of 60, or 2·0 per cent., of the deaths in the twenty-eight towns were not certified either by a registered medical practitioner or by a coroner. All the causes of death were duly certified in Portsmouth, Leicester, Oldham, Cardiff, and in six other smaller towns; the largest proportions of uncertified deaths were recorded in Preston, Bristol, and Sheffield.

HEALTH OF SCOTCH TOWNS.

The annual rate of mortality in the eight Scotch towns, which had been 17·2 and 18·7 per 1000 in the preceding two weeks, declined again to 17·6 during the week ending Aug. 29th, and was 0·5 below the mean rate that prevailed during the same period in the twenty-eight large English towns. The rates in the eight Scotch towns ranged from 8·1 in Perth and 14·1 in Aberdeen, to 18·5 in Edinburgh and 21·3 in Greenock. The 452 deaths in these towns showed a decline of 30 from the number in the preceding week, and included 47 which were referred to diarrhœa, 13 to whooping-cough, 8 to "fever," 4 to diphtheria, 3 to scarlet fever, 3 to measles, and not one to small-pox. In all, 78 deaths resulted from these principal zymotic diseases, against 68 and 70 in the preceding two weeks. These 78 deaths were equal to an annual rate of 3 per 1000, which was slightly below the mean rate from the same diseases in the twenty-eight English towns.

The annual rate of mortality in the eight Scotch towns, which had been 18·7 and 17·6 per 1000 in the preceding two weeks, rose again to 18·5 during the week ending Sept. 5th, and exceeded by 1·7 the mean rate that prevailed during the same period in the twenty-eight large English towns. The rates in the eight Scotch towns ranged from 11·9 in Leith and 15·6 in Greenock to 23·0 in Dundee and 23·6 in Perth. The 477 deaths in these towns showed an increase of 25 upon the number in the preceding week, and included 45 which were referred to diarrhœa, 13 to whooping-cough, 7 to "fever," 4 to diphtheria, 2 to scarlet fever, 1 to measles, and not one to small-pox. In all, 72 deaths resulted from these principal zymotic diseases, against 78 in each of the preceding two weeks. These 72 deaths were equal to an annual rate of 2·8 per 1000, which was slightly above the mean rate from the same diseases in the twenty-eight English towns. The fatal cases of diarrhœa, which had been 39 and 47 in the preceding two weeks, were 45 last week, of which 22 occurred in Glasgow and 14 in Dundee. The deaths referred to whooping-cough, which had 17 and 13 in the previous two week, were again 13 last week, and included 8 in Glasgow. The 7 fatal cases of "fever" were within one of the number in the preceding week, and included 5 in Glasgow. The 4 deaths from diphtheria corresponded with the number in the previous week; and the 2 fatal cases of scarlet fever were recorded in Glasgow. The deaths referred to diseases of the respiratory organs in these towns, which had been 63 and 64 in the preceding two weeks, further rose last week to 82, and exceeded by 5 the number in the corresponding week of last year. The causes of 44, or more than 9 per cent., of the deaths in the eight towns last week were not certified.

HEALTH OF DUBLIN.

The death-rate in Dublin, which had been 22·8 and 20·6 per 1000 in the preceding two weeks, rose again to 23·9 during the week ending Aug. 29th. During the preceding eight weeks of the current quarter the death-rate in the city averaged 19·8 per 1000, the rate for the same period being 18·5 in London and 16 in Edinburgh. The 164 deaths in Dublin during the week under notice showed an increase of 23 upon the number in the preceding week, and included 4 which were referred to diarrhœa, 4 to "fever," 2 to whooping-cough, and not one either to small-pox, measles, scarlet fever, or diphtheria.

The death-rate in Dublin, which had been 20·6 and 23·9 per 1000 in the preceding two weeks, declined again to 18·5 during the week ending Sept. 5th. During the past nine weeks of the current quarter the death-rate in the city averaged 19·7 per 1000, the rate for the same period being 18·2 in London and 16·0 in Edinburgh. The 127 deaths in Dublin during the week under notice showed a decline of 37 from the number in the preceding week, and included 9 which were referred to diarrhœa, 4 to whooping-cough, 2 to diphtheria, 2 to "fever," and not one either to small-pox, measles, or scarlet fever. In all, 17 deaths resulted from these principal zymotic diseases, equal to an annual rate of 2·5 per 1000, the zymotic death-rate during the same period being 2·2 in London and 1·0 in Edinburgh. The fatal cases of diarrhœa, which had been 9 and 4 in the preceding two weeks, rose again to 9 last week. The 4 deaths referred to whooping-cough showed a further increase upon recent weekly numbers. The 2 fatal cases of "fever" showed a decline of 2 from the number in the previous week, and the 2 deaths referred to diphtheria exceeded the number in any week since March last. The 127 deaths in Dublin included 28 of infants under one year of age, and 28 of persons aged upwards of sixty years; the deaths of infants exceeded the number in any recent week, while those of elderly persons showed a decline. Four inquest cases and 4 deaths from violence were registered; and 33, or more than a fourth, of the deaths occurred in public institutions. The causes of 15, or nearly 11 per cent., of the deaths in the city were not certified.

THE SERVICES.

THE Queen has granted leave to the following officers to wear the orders of the Osmanieh (Fourth Class) conferred upon them by the Khedive in recognition of their services whilst actually and entirely employed with the Egyptian Army:—Surgeon James Perceval Myles, Medical Staff, and Surgeon William Perceval Gore Graham, Medical Staff.

Dr. Henry M. Brabazon, of the Indian Medical Service, died recently at Calcutta at the early age of twenty-nine. The deceased was a graduate in medicine and surgery of the University of Dublin, and had a very distinguished collegiate career.

The death is reported at Quetta, Bengal, of enteric fever, of Surgeon Edmund McNeill Woods, M.B., Army Medical Staff, aged twenty-six years.

ARMY MEDICAL STAFF.—Surgeon Lieutenant-Colonel Joseph Walter O'Malley Martin, M.B., F.R.C.S. Irel., retires on retired pay (dated Sept. 19th, 1891); Surgeon Vere Edwd. Hunter, from half-pay, to be Surgeon-Captain, vice C. L. Walsh, deceased (dated Aug. 18th, 1891).—The undermentioned Surgeons on probation to be Surgeons-Captain (dated July 28th, 1891):—Frederick Joseph Wm. Porter, Oliver Long Robinson, Charles Edward Grey Stalkartt, M.D., Thos. Wykes Gibbard, M.B., Christopher James Healy, M.B., Charles Henry Burtchaell, M.B., Herbert John Martin Buist, M.B., George Bradshaw Stanistreet, M.B., Francis Joseph Brown, William Edmund Hardy, James England Brogden, Gerard William Tate, M.B., Norman Faichnie, M.B., Thomas Joseph Lenehan, M.B., Frederick McDowell, Francis Warburton Begbie, Ibar Ansbert Orva MacCarthy, John Henry Edward Austin, Charles William Duggan, M.B., John Joseph Gerrard, M.B., and James Conway Jameson, M.B.

ARMY MEDICAL RESERVE OF OFFICERS.—Surgeon-Lieutenant-Colonel Wm. Riddell Brunton, having resigned his Volunteer appointment, ceases to be an Officer of the Army Medical Reserve of Officers (dated Sept. 2nd, 1891).

INDIAN MEDICAL SERVICE.—The Commander-in-Chief

in India has made the following appointments:—Surgeon F. P. Maynard to the medical charge of the 13th Bengal Infantry, vice Surgeon S. C. Nandi; Surgeon E. R. W. C. Carroll, from the medical charge of the Wing, 31st Punjab Infantry, to the medical charge of the 16th Lucknow Regiment, vice Surgeon-Major J. C. C. Smith; Surgeon-Major Edward Bovill is appointed to be an Honorary Surgeon of the Central Bengal Light Horse, vice Surgeon-Major E. Sanders, retired; Surgeon J. T. Calvert, Officiating Medical Officer, 42nd Gurkha Rifles, is appointed to hold civil medical charge of the station of Kohima in addition to his military duties, vice Surgeon E. W. Hore; Surgeon A. W. D. Leahy (Bengal), Agency Surgeon in Ulwar, is appointed to be Civil Surgeon of Quetta; Surgeon-Major A. S Faulkner (Bombay), Medical Officer, 19th Regiment, Bombay Infantry, is confirmed in the appointment of Agency Surgeon in Ulwar, vice Surgeon Leahy; Surgeon T. W. Stewart is transferred from Sagaing to be Civil Surgeon of the Shwebo district; Surgeon-Major P. N. Mookerjee, whose services have been placed at the Chief Commissioner's disposal, is appointed to be Civil Surgeon of the Sagaing district, vice Surgeon T. W. Stewart, transferred; Surgeon W. J. Buchanan, officiating in medical charge, 36th Sikhs, is, with the consent of the military authorities, appointed to hold civil medical charge of the station of Shillong, in addition to his military duties, vice Surgeon J. T. Daly.

NAVAL MEDICAL SERVICE.—The following appointments have been made at the Admiralty:—Fleet Surgeon Thomas D'A. Bromlow to Haslar Hospital (dated Aug. 27th, 1891); Staff Surgeon Edward Ferguson to Plymouth Hospital (dated Sept. 20th, 1891). Surgeons: John Acheson, M.D., to the *Brisk* (undated); John A. Keogh, B.A., M.B., to the *Speedwell*, Joseph C. Wood to the *Excellent*, John C. Ferguson, B.A., M.B., to the *Boadicea*, John H. Stenhouse to the *Howe*, and George F. Dean to the *Wildfire* (all dated Sept. 7th, 1891); William E. Home, M.B., to the *Pembroke*, additional, Vidal G. Thorpe to the *Impregnable*, and Fredk. Fedarb, M.B., to the *Swiftsure* (all dated Sept. 8th, 1891); Mr. R. Henslowe to be Surgeon and Agent at Sutton-bridge station and Grove End, and Mr. Thomas W. Myles to be Surgeon and Agent at Baldoyle, Howth, and Sutton (each dated Sept. 3rd, 1891).

VOLUNTEER CORPS.—*Artillery:* 1st Ayrshire and Galloway: Acting Surgeon D. Lawrie, M.B., to be Surgeon (dated Aug. 29th, 1891).—*Rifle:* 4th Volunteer Battalion, the Cheshire Regiment: Acting Surgeon G. W. Sidebotham to be Surgeon (dated Aug. 29th, 1891).—2nd Volunteer Battalion, the Royal Sussex Regiment: Surgeon C. E. Collins is granted the rank of Surgeon-Major, ranking as Major (dated Aug. 29th, 1891).—1st Volunteer Battalion, the Hampshire Regiment: Acting Surgeon W. McIntyre resigns his appointment (dated Aug. 29th, 1891).—3rd Middlesex: Acting Surgeon G. W. H. French to be Surgeon (dated Aug. 29th, 1891).—*Infantry:* Surrey Brigade: Brigade Surgeon (ranking as Lieutenant-Colonel) W. R. Brunton vacates the appointment, having resigned his commission in the 1st Surrey Rifle Volunteer Corps (dated Aug. 15th, 1891).

Correspondence.

"Audi alteram partem."

THE DIAGNOSIS OF HEAD INJURY FROM DRUNKENNESS.

To the Editors of THE LANCET.

SIRS,—There has been recently an inquest in a police case where the patient during life presented symptoms which for a time were regarded as due to excessive drinking, and a severe injury to the skull was not suspected. Had this been the only case of the kind which has been brought before the profession it would, perhaps, hardly be worth while to notice it, but others have occurred, and on each occasion much blame has been attached, often unjustly, to those who were brought in contact with the patient. It is a curious fact that in some cases which have attracted the most attention, and in which the outcry of neglect has been loudest, the patients have been found at the necropsy to have sustained a fracture of the posterior fossa of the base of the skull, with subdural hæmorrhage. These fractures are the most difficult to diagnose during the first few hours after the receipt of the injury, and the most fatal, in proportion to their numbers, of any of the basal fractures. In looking last year through the volumes of THE LANCET for examples of fracture of the base of the skull, in which I had the help of Mr. Leonard Bidwell, we found some which have a bearing on the question. I subjoin a short summary of those most interesting to the profession.

"A man, aged thirty-two (under the care of Dr. Hunter[1] of Littleport), was thrown whilst driving a mail cart at a rapid pace. He was picked up and taken to the police-station. There was bleeding from the right ear. He was supposed to be drunk, and this was supported by the fact that he vomited, and the vomited matter smelt of drink. He was asked if he wanted to see a doctor, and replied 'No.' Next day he was semi-conscious and complained of pain in the ear. Thirty hours after the accident a bruise appeared over the right mastoid process. He recovered."

"A man, aged thirty (under the care of Mr. Spanton[2]), fell backwards off a ladder twenty-five feet high, and walked home. Next day he had slight headache, the third day he became restless, and then unconscious, and died on the fifth day. There was a small scalp wound to the left of the occipital protuberance. At the post mortem examination lymph was found over both hemispheres in the meshes of the pia mater. The anterior extremity of the left frontal lobe was bruised, and there was a clot on each side of the middle line in the posterior fossa. A fracture was found extending from the posterior margin of the foramen magnum to the left of the middle line, and crossing the lateral sinus one inch from the torcular Herophili, and extending an inch and a half beyond. There was a laceration of the wall of the sinus."

A man (whose case is reported by Mr. Hunt[3]) slipped and struck his head on the ground. He was not stunned, and had no symptoms for fourteen days. He then became comatose, and died on the following day. At the post-mortem examination a star-shaped extensive fracture was found in the left mastoid region, and extravasation of blood between the dura mater and brain. There is no note as to mastoid ecchymosis.

A woman, aged fifty, was taken by the police to a hospital supposed to be intoxicated.[4] She was roused to consciousness by the dashing of cold water in her face by the house-surgeon. She was taken to the station, and readmitted next morning to the hospital in a state of coma with convulsions, and died twenty-four hours after the accident. At the post-mortem examination there was found ecchymosis over the occiput and posterior portions of the parietal bones, and a fracture in the left side of the occipital bone, parallel to the temporo-occipital suture, which terminated at the basilar process. There was hæmorrhage between the dura mater and the brain, and in the lateral ventricles.

Dr. Heuston[5] of Dublin recorded a case of similar character three years ago, in which no symptoms were noticed until five days after the injury.

The case to which I referred in the beginning of this letter was that of a man taken to Bow-street on Aug. 7th and charged with drunkenness, having been found in a helpless, dazed condition in the street. Dr. Hamerton, who was called to see him next morning, considered his symptoms were not fully accounted for on the supposition of excessive drinking, and sent him to the infirmary; he walked there, was put to bed, became comatose, and died on the 10th. Dr. Stafford Cox, who saw the parts post mortem, has kindly written me that there was a simple fracture joining the mastoid foramen with the masto-occipital suture at right angles, a separation of the occipito-mastoid and lambdoidal sutures, with fracture of their processes. There was diffused subdural hæmorrhage. The external injury to the scalp was very slight, some bruising, but no breach of surface. It is hardly necessary to say that Dr. Cox did *not* say that operation would have saved the man's life, as he is reported to have done.

A few months ago a man was taken to a police-station in the south of London and detained, as he was supposed to be drunk. During the night he became comatose, and

[1] THE LANCET, vol. ii. 1881, p. 788.
[2] Ibid., vol. ii. 1877, p. 313.
[3] Ibid., vol. i. 1850, p. 671.
[4] Ibid., vol. ii. 1842-3, p. 945, Dr. Basham.
[5] Ibid., vol. ii. 1887, p. 119.

those in charge, becoming alarmed, called the police surgeon, who ordered his removal to St. Thomas's Hospital, where he died less than an hour after admission. This man had a fracture of the posterior fossa and subdural hæmorrhage.

The case of a cabman, somewhat similar, was published in the daily papers a few years ago. At a hospital to which he was taken after a fall from his cab his speech was thick, and he appeared dazed, but insisted on going home. He died a few hours afterwards. Dr. James Morgan said death was caused by effusion of blood on the brain following fracture of the base of the skull, of which fracture there was no external indication.

In the lectures on injuries to the head, which were given by me at the Royal College of Surgeons, and published in full in your columns last year, attention was drawn to the great danger there is of mistaking patients suffering from fracture of the posterior fossa of the base for those simply suffering from drunkenness, and several instances were given. I would refer for further information to THE LANCET, vol. ii. 1890, p. 113, merely subjoining a short extract from the third lecture:—"The difficulty presented in the diagnosis of fractures of the posterior fossa of the base before the appearance of ecchymosis over the mastoid process has already been mentioned, and I think that these form the most important section of cases occasionally sent from our hospitals as drunk and not suitable for admission. They have not uncommonly been dosed with brandy or other stimulant, the usual immediate popular treatment in this country for all accidents; hence the breath smells of alcohol. Again, such patients sometimes show a curious, half-silly expression, are mentally confused, drowsy, complain of headache, and sometimes vomit material smelling of the beer or spirit which they have taken. The injury to the head is not found unless careful search be made, having been inflicted on a part thickly covered with hair, and the blood, if there be a wound, is rarely in large amount. The period of unconsciousness may be very slight or absent."

These cases give additional proof of the difficulty attending the diagnosis of drunkenness, and I think call for such an alteration in the police regulations as shall provide for the attendance of the police surgeon as soon as possible. It should not be left to the police inspector or sergeant to give an opinion on the subject. Why not compel the prisoner or his friends to pay the fee of the surgeon when drunkenness is proved to have been the only reason for the fall? There would then be less hesitation in obtaining the necessary skilled assistance. I am, Sirs, yours truly,

Sept. 9th, 1891. WILLIAM H. BATTLE.

THE LUNACY LAW AMENDMENT ACT AND THE RECENT ACTION AT CROYDON.

To the Editors of THE LANCET.

SIRS,—With the express permission of Drs. Alfred Carpenter and M. Charles Dukes I write to call attention to the utter breakdown of the clause in the Lunacy Law Amendment Act of 1890 which professes to protect from vexatious actions medical men who have signed certificates in lunacy, as exemplified by the case recently tried at the Croydon assizes, in which damages to the extent of £2000 were claimed from the medical defendants. I have it in writing from Dr. Dukes that he has been mulcted to a large amount for legal expenses, with, as far as we know at present, no possibility of recouping himself for the loss of time, possible loss of connexion, and, above all, for the extreme anxiety and annoyance caused to him by the constant idea that he was liable to pay the full extent of the damages claimed.

I cannot do better than quote a few words of his letter to me, with which I am sure all hard-worked members of our profession will thoroughly sympathise. Dr. Dukes says, "I have always paid my way and worked hard, but I confess this bill of costs and the loss of time have crippled me, and kept me awake at night often, for the two years they threatened for £2000 damages." I have subscribed largely to the Messrs. Few's able endeavours to protect, not only my own speciality, but the profession in general, from these disgraceful attacks. And it does seem hard that, after the fair promises held out by the new Act, such a state of things should exist. It may be asked what remedy should I suggest. I reply that the Commissioners in Lunacy ought to be made responsible, and that no action should be commenced against any medical man unless, in their opinion, he had acted carelessly or with evil intention. Failing this, I would have the medical men who intend to certify lunatics pay a small sum per annum to an insurance company, who would see them through their troubles when the day of reckoning arrived.

My object in troubling you is to suggest that a subscription should be at once opened in favour of Drs. Carpenter and Dukes, to which, I need scarcely say, I should be pleased to contribute my mite. I should not have suggested this if I had not had their express permission to do so.

I am, Sirs, yours obediently,

HENRY SUTHERLAND.

Richmond-terrace, Whitehall, Sept. 8th, 1891.

P.S.—Since writing the above I have seen a letter from Dr. J. A. Austin (*Norwood Review*, Aug. 7th, 1891), in which he says: "I am of opinion that it would be a wise plan to limit the power of private practitioners to signing certificates in urgent cases only, and as a temporary measure, leaving the question of detention to be decided afterwards, deliberately and carefully, by specially appointed experts, whose decision must be held final."

PATHOLOGICAL POSITIVISM.

To the Editors of THE LANCET.

SIRS,—Whether the late Congress of Hygiene has proved financially successful or not, no one can fail to be gratified with the enormous lift it has given to sociological and pathological science. It is only as the mass of conglomerated material it has compacted becomes capable of consideration from a certain historical remoteness that the intrinsic value of its quality can be duly assayed. Pending the publication of its Transactions one or two reflections may perhaps be permitted; if these be critical in their nature, it is none the less with a generous regard that I appreciate the magnitude and value of the work the Congress has done. I cannot doubt that others as well as myself must have been struck with a tendency which manifested itself, mostly in the pathological departments, to what may be termed "positivism" or, less respectfully, "cock-sureness," a certain assumption of the finality of the learned author's conclusions after perhaps only a few months of microscopising or test-tubing. Such positivism is, I venture to submit, unworthy and unsound; when it presumes to dictate legislation it is apt to be ridiculous and cast undeserved contempt upon more modest and not less valuable researches. Curiously enough, that which one would imagine should be the best corrective to this tendency—viz, the grievous and often unconfessed errors, no less "absolutely certain" in their day, of other or the same pathological positivists—appears to be wholly inoperative. A wholesome scepticism, or even Heine's "instinct of distrust," is accordingly the mental attitude which such declaimants compel their audience to assume in self-defence.

Medical libraries and official records groan with the lumber which such experts have piled up. Dr. Billings wittily observed that medical bibliography had been compared to the animal body, but there was one point in which the analogy failed: there was no means of getting rid of effete material. This thought, humbling to us all, might perhaps be impressed respectfully upon the class of investigators to which I have been alluding. Dr. Burdon Sanderson, in introducing the discussion on Tuberculosis, observed: "It is our duty to insist on the right of science to dictate; but in doing so we must be careful not to do so until we have looked at the question from all sides, and heard the whole evidence." So far, no doubt, Dr. Sanderson was on safe ground; whether the suggestions with which he concluded his address are equally acceptable is more problematical. He advised an efficient system of skilled experts to inspect suspected meat and make a *diagnose précoce* of tuberculosis. Such experts were not to be veterinarians, whose skill Dr. Sanderson seems to distrust, but they were to be a sort of tuberculosis tea-taster, whose judgment would be reliable "because he is responsible for it and paid for it." If this view represents that of the tuberculosis Commissioners it will, of course, be seriously considered. No doubt some will inquire whether skilled experts of the kind in question have not in the past shown many of the qualities of the pathological positivist, and whether the mature deliverances of official wisdom in matters medical have been invariably charac-

terised by that circumspection which Dr. Burdon Sanderson so wisely commends.

Take this tuberculosis question, for instance, and let us see what curious oscillation medical opinion has undergone in regard to its pathology. Laennec, in his "Auscultation Médiate," 1819, impressed with the Hippocratic doctrine of the individualisation of disease, affirmed: "One cannot, without torturing the results of observation, and committing a strange abuse of all reasoning, regard tubercles as the product of inflammation of any of the constituent parts of the lung. On the other hand, a multitude of facts prove that the development of tubercles is the result of a general disposition, that it occurs without previous inflammation, and that when the latter coincides with the tuberculous affection it is most frequently posterior to it in date." This was the doctrine our fathers learnt, but not so were we instructed; for had not Felix von Niemeyer thundered forth that "Laennec's dogma, that every form of pulmonary phthisis is caused by a specific new growth, was simply a pathological hypothesis which by the more recent researches in the field of pathological anatomy had been entirely refuted"; for, said he, "tuberculosis is in most cases a secondary disease, originating, in some way unknown to us, in the action of cheesy morbid products on the organism." The view current only thirteen years ago was thus stated by Green in his much-read text-book: "The development of the general tuberculosis is not due to anything specific in the substances inoculated, but the products of various inflammatory processes (for the most part inflammations of slight intensity) may constitute the infective agents."

In 1874 Sir John Simon reported to my Lords of the Council that "he would mention it as among the most hopeful advances of modern preventive medicine that some specific diseases seem now beginning to confess in detail a birthplace exterior to man, a birthplace amid the controllable conditions in the physical nature which is around us, a birthplace amid the 'common' putrefactive changes of dead organic matter. The pathological studies of late years, including eminently certain very instructive researches which Professor Sanderson has conducted under my Lords of the Council, have *clearly shown* that in the 'common' septic ferment, or in some ferment or ferments not hitherto to be separated from it, there reside powers of disease production as positive, though not hitherto as exactly defined, as those which reside in the variolous and syphilitic contagia. And a further still more instructive teaching of the artificial infections is this—that the 'common' ferment, which in its stronger actions quickly destroys life by septicæmia, can in slighter actions start in the infected body chronic processes which will eventuate in general tubercular disease." All this reads very well, but what are we to make of it in the light of Professor Sanderson's most recent and final acknowledgment that the tubercle bacillus is the *materies morbi* of tuberculosis? I am not aware that any reconciliation of these views has been attempted, and if such be possible I would submit it is likely to be found rather in a more liberal recognition of the variability both of form and function of micro-organisms in obedience to varied soil and environment than by the too fashionable adhesion to a rigid specificity. Or, are these researches, so "hopeful" and "instructive" in their day, to be relegated to the same category as that to which the microphyte of variola ovina, which came out about the same period, has been consigned? Its recognition was heralded (Privy Council Reports) as having been made with "a completeness not yet attained in regard of any other such case"; but a year or two later, it having been found that "a very important error of interpretation" had been introduced, the medical officer thought "it would clearly be convenient that the author should at the earliest opportunity rewrite under the present correction his account of the morbid anatomy of the two diseases, and in preparing to do this should re-examine, so far as any doubt could be raised, the whole ground of the former investigations." That such "errors of interpretation" still happen an important discussion in Section 3 of the Congress tended to show.

The most recent research and its results, like the child's last toy, is invariably the most popular, and enthusiastic welcome is more appreciated than cool criticism. It was curious to note that a speaker was ruled out of order in the discussion on tuberculosis for venturing, in seconding its adjournment for three years, to express a doubt as to the *rôle* of the bacillus tuberculosis. It is an interesting speculation whether State-aided investigators are more or less trustworthy than others; they are certainly more apt to secure the ear of State departments, and I think the results required of them are apt to prejudice their researches. No doubt definite results are more acceptable to my Lords of the Council than barren records of patient pointless labour. The deficiencies inherent in medical science, and its consequent inadaptability to legislative mechanism, are apt to be forgotten. It is thus that a tendency to pathological positivism is engendered, and the lesson needs to be enforced that dogma is equally objectionable in the realm of the infinitely little as in that of the infinitely great.

I am, Sirs, yours truly,

W. J. COLLINS, M.S., M.D., B.Sc. Lond.

Eastbourne, Sept. 2nd, 1891.

CARBOLIC ACID POISONING.

To the Editors of THE LANCET.

SIRS,—After reading Dr. Greenway's interesting case of carbolic poisoning, I thought the following case, unique I think in one feature, might prove interesting and strange enough for publication. Some seven months ago I was hastily summoned by a gentleman living near to come at once to his servant who was "in a fit." On my arrival I found the girl, aged seventeen years, in a state similar to that described by Dr. Greenway. She was perfectly insensible, eyes shut, pupils very slightly contracted; her breathing faint and quiet; her pulse almost imperceptible; face deadly pale. The mistress gave me the following account. About half an hour previously the girl, after her ordinary supper of bread and cold meat, went to bed. About ten minutes afterwards, her mistress, wishing to speak to her, knocked at her door; not receiving an answer she opened it, and found the girl on the floor in the state I have described above. I injected ether at intervals, and gave milk and brandy per rectum in order to keep life in her. In about three hours she began to make a little improvement; the breathing became stronger and the pulse more perceptible at the wrist. One hour afterwards she opened her eyes, was able to say she "felt better," and then seemed to settle into an ordinary sleep. When I was leaving I was naturally asked as to what kind of "fit" I thought it was, whether she would be subject to them, and whether I could account for the present one. I was bound to own myself puzzled, but said "her state greatly reminded me of a case of poisoning with carbolic acid which I had had a fortnight previously." In this present case, however, we had not the slightest reason for thinking she had taken anything. There was no smell, and nothing whatever was found in her room, and she had the same supper as her master and mistress. The next morning I was somewhat startled by the mistress bringing me a small scent-bottle which had contained carbolic acid, which she had found in the garden under the girl's bedroom window. On my round I called at the girl's home, where she had gone after her recovery, and questioned her on the subject of the bottle. She denied all knowledge of it, and that she had taken anything at all. As she was a respectable girl from a respectable family, I felt bound to believe her. On questioning her mother I found that she had never had a fit of any kind before, but added that the girl for the last twelve months had often complained of "pains in her stomach," and "feeling queer" at times. These symptoms she very naturally put down to her menstrual periods. One afternoon, six months after, a message came for me to go as soon as possible to see the same girl. The messenger stated, "she had had another fit; not so bad as she had before in her other situation, and that they had taken her home in a cab." I found she had been left in the house alone, and when her mistress returned she found her insensible. Her mother was sent for, and as she had then somewhat recovered she was taken home. She was very pale, but sensible, and able to answer questions. I was told she was very sick in the cab over her dress. When that was brought to me it smelt strongly of carbolic acid. She again stoutly denied having taken anything. This time, however, of course I did not believe her; "smelling" was certainly in this case "believing." In the evening her master called and told me they had found a small bottle of carbolic acid in the kitchen, together with lumps of sugar, some of them more or less soaked with the acid. We discovered afterwards the chemist who had supplied the acid, and the girl eventually confessed that she had been in the habit of taking "drops" on "sugar," "because she liked it," for over a twelvemonth.

I am, Sirs, yours truly,

Aug. 29th, 1891. JOHN B. HARRIS, M.D.

THE ETHICS OF THE SICK BED.

To the Editors of THE LANCET.

SIRS,—A question which has on many occasions given me a good deal of anxiety, and perhaps others also in the exercise of their duties to their patients, has just now been more than usually pressed upon my attention, so that I am constrained to submit it to you for your consideration and, I trust, elucidation. I allude to the difficulty of placing a limit upon the visits paid by ministers of religion to patients in acute illness, and their practices during those visits. According to my experience, they are mostly paid without any reference to their advisability, and generally without any sanction from the doctor in attendance. They produce much exhaustion, too, by their duration and the emotional excitement attending them. How far one would be justified in prohibiting them entirely in some cases and merely limiting them in others is a question involving considerable responsibility in its decision, and one which I venture to suggest might be fruitfully discussed in your columns.

I am, Sirs, yours faithfully,

Sept. 1st, 1891. GENERAL PRACTITIONER.

AMONG THE HIGHER ALPS.

(FROM A CORRESPONDENT.)

THERE are various motives for visiting Switzerland, and especially that portion of it known as *Die Alpenwelt* or the Alpine world. It may be sought simply as the most picturesque region in Europe, and as an indispensable item in the usual programme of travel. Or experience may have shown that for overtaxed brains and worried nerves there is no remedy comparable to the deep calm, keen air, and marvellous scenery of the Alps. Or the high altitudes may be resorted to for some more specific malady of lungs, nerves, or digestion. And as there are various motives for resorting to the Alps, various also are the modes of seeing and enjoying them. There is the mode of the average tourist, who keeps to beaten tracks and rarely forsakes the easy and safe conveyance of train, steamboat, and diligence. Unsatisfactory and incomplete as is this method, it cannot be denied that by its adoption much may be seen in a country so thoroughly organised as is Switzerland in the interests of the tourist. In this way the traveller may float on the bosom of lakes Lucerne, Como, or Geneva, and enjoy enchanting prospects; or he may ascend by rail to the summit of Pilatus or the Righi or Monte Generoso and obtain distant but still stupendous panoramas of the Bernese Oberland or the Pennine Alps; or he may cross by diligence the Furka Pass or the Tête Noire, and learn something, if only a little, of the inner secrets of the Alpine world. This method may be commended for a first visit, or to those who from feeble health, advancing years, or other reasons are incapable of any considerable amount of physical exertion. It is better than wholly missing the vivid impressions which any visit to Switzerland, however ill-planned, can hardly fail to excite; but by the hardy traveller and experienced mountaineer it will be regarded simply as a *pis aller*.

The other and entirely better plan is to plunge boldly into the inner recesses of the Alpine world; to select one, two, or more convenient centres, and thence, as time, inclination, physical endurance, and weather may direct, to climb peaks, explore valleys, clamber over glaciers, and traverse snowfields. Beautiful as are the Alps when seen from the Terrace at Berne, or the Quay at Geneva, or the summit of Righi or Pilatus—especially when struck by the first rays of the rising sun or illumined at evening by the famous *Alpenglühen*, or Alpine Glow—the impression thus created, vivid as it is, cannot compare with that generated by a closer view of their boundless snowfields, huge ice-rivers, dark valleys, and rocky wilds. The one is a fairy-like glimpse, the other is an adequate and satisfying view of all that is stupendous and magnificent in the works of Nature. But this closer and more intimate acquaintance with the Alps is not for everybody. It can only be accomplished on foot, and at the cost of prolonged exertion and somewhat severe fatigue. To many such a programme for the holiday month would mean not mental and physical refreshment and recuperation, but serious, perhaps disastrous, overstrain of heart, lungs, or muscles. It cannot be too clearly laid down that a pedestrian tour among the higher Alps is a serious effort, not to be lightly undertaken by those unused to regular and considerable physical exertion. More especially is this warning necessary in the case of those who have passed the prime of life, or who have any weakness of heart or respiratory organs, or whose usual habit of life is purely sedentary. Such persons had much better "accept the situation," and be content to enjoy the Alps from afar. On the other hand, it is only just to point out that many persons can without injury undertake among the mountains an amount of physical effort to which they would be quite unequal at home. The explanation is, no doubt, partly the stimulus of climate; to a lesser degree the stimulus of travel.

Confining myself, then, for the present to the case of the tourist who selects the Alps for his holiday month, whose tastes and physical powers incline him to *bonâ-fide* mountaineering, the question arises, What localities shall he choose as centres for his excursions? This is a question readily answered in a way that will command the assent of all experienced Alpine climbers. There are six places—four to the north of the Alps and two to the south—which are recognised centres for mountaineering. These places are Chamonix, Grindelwald, Zermatt, Pontresina, Courmayeur, and Macugnaga. Other centres equally good as these might possibly be indicated, but certainly none better. The tourist will probably be well advised in confining himself to two, or at most three, of these for a single season, and many of the most experienced climbers prefer to limit themselves to one. For those whose knowledge of the Alps is slight, and who are only beginning to explore their inner mysteries, Grindelwald, as the key to the Bernese Oberland, presents many advantages. It is a charming valley, readily accessible, is the converging point of several notable passes, and an excellent *point de départ* for a great number of Alpine ascents of varying degrees of difficulty and danger. Grindelwald is twelve miles from Interlaken, and is reached by a new railway, partly on the adhesive and partly on the rack-and-pinion system. The maximum gradient at any point is 120 in 1000. Above the valley tower three of the giants of the Bernese Oberland, the Wetterhorn, Schreckhorn, and Eiger, whose heights range from about 12,000 to 13,000 feet. Between the valley and the lake of Brienz are situated several lesser peaks, one of which—the Faulhorn—is one of the most favourite of those coigns of vantage or *Aussichtpunkte* in which the outlying spurs of the Alps are so rich. The tourist may find it advantageous, on establishing himself in Grindelwald, to test his physical powers by two or three days devoted to minor excursions to such points as the two glaciers of the Schreckhorn, the Great Scheidegg Pass, or the Wengern Alp. Any of these can readily be accomplished in a single day, and will serve both as a test of stamina and as a foretaste of what is to come. A more serious effort is the ascent of the Faulhorn, which may next be undertaken. The height is only moderate—viz., 8803 feet; but the path is very steep, and the ascent (five hours), with a descent of three hours form a fairly stiff day's work even for a good climber. The prospect from the summit of the Faulhorn is for its height one of the best in Switzerland. At our feet northwards lie the lakes Brienz and Thun, green as emerald. Further off glimpses of lakes Lucerne and Zug may be obtained, with their familiar peaks—Righi and Pilatus—beyond, the plain of northern Switzerland. To the south stretches the magnificent snowy range of the Bernese Alps, the three-peaked Wetterhorn, the pyramidal Finsteraarhorn, the bare and precipitous Eiger, the shapely Jungfrau with her robe of spotless snow, the beautiful Blümlis Alp, and a host of others. As we look and listen, the profound stillness of the Alps is broken by the thunderous rumble of the distant avalanche. The higher peaks around Grindelwald have all been scaled, but are difficult and dangerous, and are much less frequently ascended than the great summits around Zermatt or Chamonix. No visitor to Grindelwald should omit an excursion to Mürren, now well known as one of the gems of the Alpine world. This little village is magnificently situated above the Lauterbrunnen Thal, at an elevation of over 5000 ft., and commands charming prospects of the Jungfrau and neighbouring peaks. It is not so much a centre for mountaineering excursions, although such can be obtained, as a delightful spot in which to "lie by," to enjoy without much effort the charms of Alpine air and Alpine scenery, and to recuperate for fresh efforts. Mürren tempts us to rest, just as Grindelwald, Zermatt, or Chamonix tempts us to climb.

It is not to my present purpose to enter into details re-

garding the facilities for mountaineering afforded by the other centres mentioned. Zermatt, with the Gorner Grat and the Ober-Rothhorn for comparative novices, the Breithorn and the Cima di Jazzi for those more experienced, and Monte Rosa and the Matterhorn for thoroughly expert mountaineers; Chamonix with La Flegère, the Brévent, the Mer de Glace, the Col du Géant, Mont Blanc, and a host of other excursions of every grade of difficulty and danger; Pontresina, Courmayeur, and Macugnaga—all these, their beauties, their dangers, their tragedies, are sufficiently described elsewhere. Are they not written in Murray and Baedeker and the *Guide Joanne?* More opportune will it be to inquire into some of the rules which should regulate mountaineering, the benefits to be expected from it, the dangers to be guarded against, and the precautions to be adopted. I have already laid down what is the cardinal principle on the subject—viz, that the higher and more difficult ascents are only for those who are sound in wind and limb, not too advanced in years, and not habitually unpractised in pedestrianism. Those on the wrong side of middle age, or who have any organic weakness of heart, lungs, or muscles, or who lead a habitually sedentary life, had better keep to mule-back or shun the Alps altogether. Granted, then, a fair amount of physical fitness for mountaineering excursions, the next point is the nature of the preparations to be made. Clothing can hardly be too heavy. It is sufficiently sultry in the Alpine valleys in summer, but once an altitude of 10,000 feet or upwards is attained "the air bites shrewdly," and the climber finds that "the nipping and the eager air" calls for the heaviest of tweeds and the warmest of woollen hose. Boots, also, must be of the strongest make, and several rows of nails are *de rigueur* for glaciers and snowfields. A heavy tweed cap, with lappets for the ears and neck, is useful, as the wind is often violent on the summits of the Alps, and cuts like a scythe. Heavy flannels, warm gloves, smoked spectacles, an alpenstock or ice axe, a small wallet to carry some slight refreshment, complete the necessary outfit. The question of food is now seldom a matter of great difficulty, inasmuch as "refuge huts" have been built on nearly all the favourite peaks, and at these huts food and a bed may be obtained. The climber will probably find that he must not eat heartily before commencing an ascent, and that he had better be content with very light refreshment *en route*. A very early start after a light breakfast; a piece of bread with some honey, a lump of chocolate, a glass of black coffee, or the suck of a lemon on the way; and then a substantial meal when the day's toils are over—such is, probably, the safest programme. The use of alcohol by the climber is, of course, a *quæstio vexata*. The writer is disposed to agree with Dr. Clifford Allbutt's opinion that "alcohol is poison to the mountaineer," provided that the meaning be that alcohol is injurious if taken during or prior to an ascent. The value of brandy as a restorative *after* severe effort is hardly capable of dispute. Alpine guides also use spirits—wisely or unwisely—when exposed to severe cold, as during long tramps across snow or ice. The writer's experience strongly inclines him to the view that alcohol in any form decidedly reduces muscular activity while its influence lasts. Drinking glacier water, or indeed any fluid at all freely, is injurious during a severe ascent. A lemon is amply sufficient to quench thirst.

The novice encounters several difficulties in his first efforts at any considerable mountaineering feat. He may suffer from palpitation, or bleeding at the nose, or foot soreness, or headache and asthenopia from the glare of sunlight on the snow. Palpitation may be due to physical fatigue or to the atmospheric rarefaction, or to both causes combined. In the former case, it is a sign that the climber is overtaxing himself. Expert mountaineers lay it down as a cardinal rule that the climber must not adopt a pace that speedily induces any difficulty of breathing or other sign of fatigue. He must cultivate a slow, steady, jog-trot style of walking, such as he can maintain for hours without distress, and without the necessity for resting. Bleeding at the nose, although a phenomenon that has taken a strong hold of the popular imagination, is really of comparatively infrequent occurrence, and is rarely troublesome. Foot-soreness is a more serious matter, and may be combated by the various means that are of avail for hardening the skin of the feet. It is well for the eager climber to remember that if his feet once become badly blistered, bruised, or sprained, he is virtually incapacitated for some weeks for any considerable expedition. Headache, asthenopia, "snow-blindness," &c, from the effect of the glare of sunlight upon ice and snowfields, are occasionally embarrassing, but tolerance is usually established.

The beneficial effects of mountaineering are often very striking. No tonic, not even the fresh breezes of the ocean highways, can compare with the keen air of the higher Alps. Especially to the tired brain-worker is this tonic of potent value, conferring fresh energy, recuperated digestive power, and calm sleep. In order that this happy result may be achieved, it is indispensable that excessive fatigue should be shunned, and the rational principles of mountaineering carefully observed. The tonic influence of the higher Alps is, no doubt, mainly climatic, but other elements come into play. The emotional nature is powerfully stimulated by the grandeur of the Alpine scenery. Awe and wonder are evoked, the sense of novelty is deeply stirred, the mind experiences a new sense of amplitude and expansion as it surveys lofty summits, immense glaciers, illimitable snowfields. The deep calm and profound silence of the Alpine heights powerfully affect the imagination.

"The crowded hour of glorious life"

which rewards the hardy climber of some peak is one of the most vivid of emotional experiences. The regular mountaineer comes to cherish a deep affection for those seats of Nature's sublimities—

"He who first met the highland's swelling blue,
Will love each peak that shows a kindred hue;
Hail in each crag a friend's familiar face,
And clasp the mountain in his mind's embrace."

So says Byron. Mountaineers can understand the sentiment.

NORTHERN COUNTIES NOTES.

(FROM OUR OWN CORRESPONDENT.)

The Scheme for a New Infirmary in Newcastle.

THE question of the rebuilding or extension of the Royal Infirmary in Newcastle came up again at a meeting of the governors, when one of the surgeons, Mr. Frederick Page, offered, on behalf of a patient of his, the sum of £1000 towards the new building. It was also suggested that capital might be raised by allowing annuities to holders at the same rate of interest as paid by Government. It was likewise mentioned that the workmen would have a share in the building of the new infirmary, and that in all probability they would combine for the purpose of raising not less than £5000. Upon the whole, the scheme has decidedly advanced a step since last meeting. The governors expressed themselves much pleased to hear of the improvement in Dr. Bruce's health, and hoped the venerable doctor will be spared to take part in the work necessary to procure a new infirmary for Newcastle.

The Newcastle Borough Asylum.

In view of the extension of the Borough Lunatic Asylum at Coxlodge, the visiting justices have advertised for plans for the new asylum, which is to hold 350 patients. Premiums amounting to £300 are offered for designs, but the competition is limited to Newcastle architects.

Self-amputation.

The *Carlisle Journal* says that a shepherd's son near Galashiels, whilst gathering a bunch of white heather, was bitten on the middle finger of the left hand by an adder. Fearing the consequences, the lad resolved on the instant to amputate the finger below the place of bite, and at once set to work with his pocket knife, purposing to cut off the finger close to the palm of the hand. He cut down to the bone, but found the knife would not cut through that. He managed, however, to sever the finger at the nearest joint. He then went into the town to get a surgeon to dress the wound, who cut away the stump close to the palm. The lad preferred to have the operation done without chloroform, and was carrying the severed part of the finger in his coat pocket.

A Cumberland Centenarian.

Mr. Thomas Moffat, who resides at South End, Wigton, celebrated his 101st birthday last week. Except that his hearing is somewhat impaired, he is hale and hearty. He was apprenticed on Aug. 3rd, 1802, as a hand-loom weaver, and he still preserves his indentures, which are interesting as a good proof of his age. Although not a strict teetotaller, he attributes his longevity mainly to his abstaining from alcoholic liquor. He has smoked more or

less all his life until about two or three years ago, when, feeling that tobacco made him dizzy, he gave up the pipe.

Death under Methylene at a Dentist's at Carlisle.

A fatal case under methylene occurred at Carlisle on the 29th ult. The patient, a married woman, aged twenty-seven, was, preparatory to tooth extraction, put under methylene, about three drachms being used. After a few inspirations the pulse was noticed to fail, and although various measures were used it was found impossible to resuscitate her. Dr. Lediard and Mr. Parker gave evidence showing that death had taken place from engorgement of the lungs and asphyxia, and that proper means were used to restore the patient. Dr. Lediard, however, considered that Junker's inhaler, which was used by Sir Spencer Wells, ought to have been employed. He considered three drachms a large amount to begin with, and that a medical man should be present at these administrations, as no anæsthetic was absolutely safe. Mr. Parker, dentist, who gave the methylene, said he had used it in thousands of cases since 1874 without accident. The jury said in their verdict that no blame was attached to Mr. Parker or his assistant.

The late Disaster at the Chemical Works, Gateshead.

The inquest on the seven men who were killed on July 26th last at the chemical works at Felling, near Gateshead, was resumed and concluded on Aug. 26th. Mr. T. W. Stuart, district manager for the Alkali Company, and Mr. A. E. Fletcher, chief inspector, who said he had thirty years' experience in alkali works, gave evidence, after which the jury brought in the following verdict: "That the crack in the furnace was the cause of the disaster. The hot air was drawn into the centre condensor, ignited the coke, and the fire acting upon the stone sides of the condensor, split them, and the condensor collapsed. In falling it damaged the other three condensors, and they fell soon afterwards. The occurrence was accidental."

Stockton and Middlesbrough.

The annual meeting of the governors of the Stockton Hospital was held last week, and the house surgeon's report showed that 533 in-door and 1743 out-door patients had been treated. There were now 53 patients' beds in the institution, and in addition 7 children's cots. The revenue account showed a balance in hand, but the new wing account showed a balance on the wrong side.—Lady Londonderry presided last week at a large and influential meeting of the Stockton District Nursing Association, which was formed last year, and is now in practical working order. The Mayor moved a vote of thanks to Lady Londonderry for her services, and subscriptions were announced amounting to about £700.

An important discovery is announced as having just been made at Middlesbrough. The Newcastle Chemical Company, whilst boring experimentally near their salt boreholes, came across a bed of coal about 2 ft. thick, of excellent quality. Although the cost of sinking a shaft to the depth the coal lies—at about 2000 ft.—would be enormous, the result of the operations is awaited in the Cleveland district with the keenest interest.

A shocking accident occurred at Allenson's chemical works last week; a little boy got into the works for some purpose, and while playing about fell into a caustic pan containing neutralised liquor of a temperature of from 170° to 180°. He was got out alive, but died in a short time in great agony.

Newcastle-upon-Tyne, Sept. 9th.

SCOTLAND.

(FROM OUR OWN CORRESPONDENTS.)

Edinburgh Water-supply.

REFERENCE has been made from time to time here regarding the question of a new, or rather an additional, water-supply for Edinburgh. The opinion of the engineers appointed by the Water Trust to report on the whole subject was referred to some time ago. Now the engineers have sent in their report on the second part of the remit—namely, the best source from which to draw an additional supply. The three schemes examined are known respectively as the Manor Scheme, the Tweed Scheme, and the St. Mary's Loch Scheme. It is not necessary here to enter into the details of these. The first, or Manor Scheme, is recommended on the following grounds:—That it is the nearest service in point of distance to Edinburgh, that the water to be obtained is the best in point of quality, that Parliament did some years ago sanction the appropriation of it for the supply of the Edinburgh district, and the cost of the first instalment would be the least of any of the schemes. All these seem sound and good reasons if the Water Trust finally decide on the necessity of giving the city an additional supply. The scheme recommended will give a supply of about 15,000,000 gallons per day. It will require the formation of two large reservoirs, which will provide storage sufficient to supply the city and furnish the compensation water for a period of 180 days. The work could be done in two sections. The first, giving a supply of 10,000,000 gallons per day to the city, is estimated to cost £602,364, and for the second instalment of 5,000,000 gallons per day £240,076, making a total of £842,440. This would more than double the present available quantity of water—that is, it would make provision for a population double that now existing at the present rate of consumption—viz., 38 gallons per head per day.

Edinburgh Public Health Committee.

At the meeting of this committee last week various matters bearing upon the public health were brought forward. The medical officer presented his monthly statistics, from which it appeared that during the month of August there were 313 deaths in the city, giving a death-rate of 14·33 per 1000 as compared with an average death-rate of 15·41 per 1000 for the five years preceding. As regards age, 116 were under five years, 40 between five and thirty, 81 between thirty and sixty, and 76 about sixty years. Deaths from diseases of the chest numbered 78, from debility and old age 48, and from zymotic diseases 22. Of the zymotic cases, there were 3 of typhoid fever, 5 of diphtheria, 3 of scarlatina, 2 of measles, 6 of whooping-cough, and 3 of erysipelas. During the month there were 165 cases of infectious disease reported, as compared with 207 in the same month of last year. The cases reported consisted of 83 of measles, 36 of scarlatina, 21 of diphtheria, and 25 of typhoid fever. In the City Hospital there were 120 cases at the end of July. During August 91 cases were admitted, 69 were discharged, and 6 died. Of the 136 cases remaining in the hospital, there were 22 cases of typhoid fever, 9 of diphtheria, 45 of scarlet fever, 18 of measles, 11 of whooping-cough, 13 of erysipelas, and 18 under observation. The public health estimates for the year to May 15th next were also before the committee. The total expenditure is estimated at £13,240, which is £2315 over last year's estimate, but is £2272 under the actual expenditure. The expenditure last year was quite exceptional, and it is not anticipated that it will be as high during the current year. In this it may be hoped the committee is correct; but from the willingness manifested by all classes to have their cases of infectious disease transferred from private residences to the hospital, and from the fact that that willingness is more likely to increase with advancing intelligence, this source of expenditure is almost certain to show a steady upward increase. Doubtless there will be grumbling at the increase in the rates which this and other things will render necessary; but if the public derived as much benefit from all increased expenditure as from this department of it, they might more cheerfully submit to their fate.

Health of Leith.

The number of deaths registered in Leith during the month of August was 75, making the mortality at the rate of 12·85 per 1000. Of these, 26 were children under one year old. The births registered during the month were 193.

Glasgow Royal Infirmary.

At a recent meeting of the Royal Infirmary the following appointments were made: J. Hogarth Pringle, M.B., C.M., M.R.C.S., assistant surgeon; Thomas Kirkpatrick Munro, M.A., M.B., C.M., assistant physician; James Kerr Love, M.D., aural surgeon; W. Howard Gray, L.D.S., dental surgeon; Dr. J. C. Woodburn, honorary consulting dental surgeon. There were numerous applications. The appointment of Dr. Woodburn was unanimous; the other candidates were elected by majorities.

Sept. 9th.

IRELAND.

(FROM OUR OWN CORRESPONDENTS.)

Sanitary Condition of Green-street Court-house, Dublin.

A DEPUTATION of Sessions Bar practising in Green-street Court-house had an interview last Monday with the Corporation of Dublin, in reference to the necessary steps to be taken to remedy its insanitary condition. They suggested that a sum of £300 or £400 might be utilised for putting it into a sanitary state; but the majority considered that such an outlay would be perfectly useless, and that the erection of a new court-house was absolutely necessary. The matter has been referred by the Corporation to the Law and Finance Committee to report on the subject; and if the Government are willing to renew their old offer of £13,000, and the Corporation and the County Grand Jury contribute in a generous manner, there is no reason why a structure adapted to meet all requirements should not be erected at no distant date.

Lunacy Legislation.

The committee appointed by his Excellency the Lord Lieutenant to consider the question of lunacy administration in Ireland has presented a report on the existing lunacy laws and the requirements for future legislation. This report deals with nearly all matters touching the condition of the insane in Ireland, and points out the machinery and provisions necessary for a good lunacy law, on what principles they should rest, and how their working can best be secured. The members of the committee suggest that the existing Irish statutes dealing with the care of the insane should be repealed by the introduction of an amending and consolidating Act. The existing Irish Lunacy Laws are defective in their enactments for the care of the insane in public and private asylums, while they afford little or no protection to lunatics in workhouses, to those wandering at large, or under private care. The simplest course would be to introduce a Bill repealing all Acts dealing with the care of the insane in Ireland, and introducing provisions for lunacy administration in accordance with the recommendation of the Commission. The committee have recommended as an essential feature of Irish lunacy legislation the creation of a strong Lunacy Board for Ireland, not only because it is necessary to have laws framed for the protection of the insane, but because it is equally important to have them carried out in accordance with their best interests, and in such a manner as to meet the approval of society at large. The committee further recommend that any new lunacy legislation shall deal with the insane in workhouses and wandering at large, so as to place all lunatics unrecognised by the existing law under the care of the State. In order to provide suitable accommodation for these two classes the committee have recommended the erection of provincial or succursal asylums by any district or combination of districts; that power should be given to local boards to acquire unoccupied workhouses and to obtain licences for certain wards in unoccupied workhouses for the use of the incurable insane; and that provision should be made for the care of certain cases in private dwellings with the sanction of the general board. Further, it is advised that more stringent regulations should be introduced for the protection of the insane in private asylums, and the committee recommend that local boards should be empowered to make provision for those who are only able to contribute small sums towards their maintenance.

Health of Provincial Town Districts.

During the quarter ended July 4th two deaths from small-pox were registered in Belfast during the first part of the year, and were the only fatal cases of this disease recorded in any of the fifteen districts since the close of the year 1887. There has not been a single death from measles registered in any of the districts for the past three quarters, and the only deaths from scarlatina last year were 5 in Belfast and 1 in Londonderry. As regards fever, 51 deaths from continued fever were recorded, being 18 under the number for the previous three months. Of these, typhus fever caused 10, enteric fever 33, and simple continued fever 8; whooping-cough caused 74 deaths, and diphtheria 4, and diarrhœa and dysentery 62.

The Belfast Royal Hospital.

At a quarterly meeting of the subscribers, held on Monday, Sept. 7th, Dr. Ross was re-elected as physician, Dr. Byers as physician for diseases of wome Dr. Walton Brown as surgeon, Dr. Nelson as ophthalmic surgeon, and Dr. Strafford Smith as assistant physician. They were all reappointed for a period of four years. Dr. Mitchell was selected again as resident surgeon. Great regret was expressed at the meeting that the honorary secretary, Mr. Marsh, had been compelled, owing to ill health, to resign.

Death of Mr. Philip Lavery, L.R.C.P.I., M.R.C.S.Eng., J.P., Armagh.

It was with sincere regret that the numerous friends of Mr. Lavery heard of his death, which took place at his residence, English-street, Armagh, on Saturday, Aug. 29th, although, from his protracted illness, his decease was not unexpected. For several years Mr. Lavery was surgeon-major in the Armagh Light Infantry, and was much respected by his brother officers. He was a county magistrate and a grand juror for the county Armagh, and a member of several of the local boards, and in all these positions he enjoyed the confidence of those with whom he came in contact. His funeral was very largely attended, showing the respect entertained for him by his fellow townsmen.

Mr. G. F. MacNamara has been elected resident surgeon to the South Dublin Union Workhouse.

Sept. 8th.

PARIS.

(FROM OUR OWN CORRESPONDENTS.)

Toxic Power of Urine as an Aid to Diagnosis.

AT a recent meeting of the Academy of Medicine, Dr. Semmola of Naples communicated a paper on the "Poisonous Qualities of Urine adopted as an adjunct to Diagnosis." Up to the present time, he remarked, analysis of urine had for its principal object a diagnostic end. The discovery of leucomaines and ptomaines had greatly augmented the clinical importance of the chemical composition of urine, but the research of the toxic substances contained in the renal secretion is too long and too difficult for ordinary clinical purposes to be practised in a daily round of work. What is wanted is a rapid and simple method of measuring the toxic power of urine, such as the method of Bouchard, which consists in injecting it subcutaneously into animals. What may be termed the biological analysis here replaces with advantage the complicated chemical manipulation and calculation. Dr. Semmola had carried out this plan in his practice during the past four months, and amongst other cases he cited two in which the recorded observations were interesting. One was a case of phlegmonous disease of the arm in an old man of seventy. The general symptoms were extremely grave, but the biological analysis of the urine was such as to warrant a favourable prognosis, and in the result this proved correct. Dr. Semmola based his hopeful view of the case on the gradual diminution in the toxic power of the renal secretion, notwithstanding the persistence for some time of the grave symptoms above indicated. In another instance he had under observation a case of pneumonia in which an infectious origin was strongly suspected. At a certain stage in the malady a complication from cerebro-spinal meningitis was feared, so pronounced and grave were the cerebral manifestations. Here also the "biological" analysis of the urine furnished useful indications. In this latter case Dr. Semmola administered iodide of potassium, which he considered an excellent therapeutic agent in certain infectious maladies.

Resection of the Ovary.

At a recent meeting of the Surgical Society M. Pozzi read a paper on resection of the ovary. He said that it often happened that an ovary was diseased in part only, and that for such cases the partial ablation of the gland was proposed. He had recently operated in two cases with the best results. As to the utility of this conservative procedure from the point of view of ulterior fecundation, it was to be borne in mind that any fragment of an ovary was capable of evolving an ovule. Therefore, according to the author's opinion, resection of the gland should only be practised in cases where the Fallopian tube was found to be permeable. In one of his cases he found both ovaries sclero-cystic, prolapsed, and fixed by adhesions. The tubes were twisted, but were readily put right, and found to be permeable. He removed one altogether and a third of the second, and, having spread out the free end of the tube over the part of the gland left *in situ*, he secured and fixed the whole by catgut ligature. The wound healed kindly. M.

Pozzi concluded by advocating the operation in suitable cases, and especially where the tubes were proved to be still permeable, the contrary of which he regarded as a distinct contraindication of the operation.

Myopia and Heredity.

M. Javal, at a late meeting of the Academy of Medicine, read a paper on the influence of heredity in the production of myopia. According to M. Motais, heredity is a highly important factor in the evolution of this condition of the visual organs. M. Javal, however, does not altogether agree with this theory, but believes that, on the contrary, it is possible, by the exercise of proper precautions, to prevent children so predisposed from becoming myopic. Astigmatism, on the other hand, he considered to be purely hereditary, and he said there could be no doubt that astigmatism was a very potent factor in the production of myopia. This heredity in astigmatism is not only a question of family, but is also a characteristic of certain races. The Israelites, for example, have an inverse astigmatism; with them the horizontal lines are more clearly defined than the vertical. The children of all myopic parents should therefore be carefully examined for astigmatism, which, if found to exist, should be corrected early. They should also be taught to read and write in a good light, and at the greatest possible distance. The inclination of the handwriting and the position of the body in writing are also of importance.

A Man Buried Alive.

A very remarkable story is related from Saint Crépin, near Rodez. At the funeral of an old man of seventy, who died the day before, the four men who carried the coffin from the church to the cemetery hard by became conscious of what they believed to be movements inside the coffin. Nothing was said at the time; but when the ceremony was terminated they compared notes, and each one was astonished to learn that his companions felt similar sensations. They communicated their fears to the clergyman, who immediately went to the graveyard and had the coffin broken open. They were greatly taken aback when they saw the hands of the departed, which had been crossed on the chest, raised towards the eyes; but it occurred to them that this might very well have happened by accident. They, however, removed the body out of the coffin, and although they spoke to it it did not reply, yet it swallowed some cordial which was administered. The swallowing also might have been more apparent than real, but the strangest part of this strange story is that the body was taken back to the house, and it is said that the measures adopted to restore animation and life were successful, for the next day the lately deceased was undoubtedly living once more, for he spoke and drank fluid nourishment, and is now said, although extremely feeble, to be slowly recovering. The foregoing story, which is going the round of the lay and medical press, is about as extraordinary as it is seasonable.

Paris, Sept. 9th.

BERLIN.

(FROM OUR OWN CORRESPONDENT.)

Professor von Helmholtz.

HERMANN VON HELMHOLTZ celebrated his seventieth birthday last week at Maria de Campillo, in the Sarca Valley, whither many congratulatory telegrams were sent to him from Berlin, and probably from many other places. The formal celebration of the day will take place on Nov. 2nd, when addresses and presents will be showered upon him. A fund has been raised in honour of the anniversary under the name of the Helmholtz Stiftung, and it already amounts to more than 45,000 marks (shillings). The list of subscribers even at present fills four closely-printed folio pages, and subscriptions are still flowing in. Many nations are represented in this list, and the use of the fund is to be regulated by the Academy of Sciences in accordance with this fact. The striking of a Helmholtz medal, to be bestowed every two or three years on him whose researches in the field of physics since the last bestowal are recognised as the greatest, is to be defrayed from the interest of the fund. The first of these medals will be awarded to Helmholtz himself. Hildebrandt's bust of Helmholtz, which is approaching completion, will be defrayed from the same source. A banquet will be given in the great *savant's* honour in November. His native city of Potsdam, in the High School of which his father was an eminent master, has bestowed on him the distinction of honorary citizenship; and the King of Sweden and Norway has honoured him by conferring on him the Grand Cross of the Order of the North Star. On the occasion of his seventieth birthday, Professor von Helmholtz was appointed an honorary member of the Berlin Medical Society, in recognition of the great service rendered by him to medicine by the invention of the ophthalmoscope. The other honorary members are Professor Virchow, Duke Charles Theodore of Bavaria, Ex-Minister Dr. von Gossler, Surgeon-General von Coler, Professor Koch, and the eminent Berlin practitioner, Dr. Körte. On the same occasion the Dutch Society for the Promotion of Medicine sent Helmholtz two large phototypes of the Dutch *savants*, Willebrord Snell and Christian Huygens, with a Latin address artistically decorated, of which the following is a translation: "The Dutch Society for the Promotion of Medicine presents its heartiest congratulations to the famous and far-known Hermann von Helmholtz, who has rendered the world such great services in the provinces of medicine, physiology, and physics, on the day on which he completes his seventieth year. It reverently begs him at the same time kindly to accept the portraits of the famous men, Willebrord Snell and Christian Huygens, whose footsteps he has followed with such great success, and whose renown he has attained, as proofs of its veneration and admiration."

The best Stoves for Schools and Hospitals.

Dr. von Gossler, having been solicited, when Minister of Ecclesiastical, Educational, and Medical Affairs, by the Union of East and West Prussian Potters and Stovemakers to propose a competition for the best method of treating and ventilating hospitals and schools, consulted Professor Koch. Koch disputed the advantages of the Dutch tile or cockle stove for such establishments, and recommended mantled iron stoves as better for ventilation. This verdict induced the officials of the said Union to address an elaborate defence of cockle-stoves to Dr. von Gossler's successor, Count Zedlitz, and to beg him to propose the wished-for competition. This document maintained with special emphasis that the air in rooms heated by mantled iron stoves has to pass over strongly heated—nay, red hot—iron plates, in which process the organic dust particles are burned and the air polluted, which cannot happen in rooms heated by cockle stoves. The Minister, however, has declined to propose the competition.

Leopold Just.

The botanist, Leopold Just, who died the other day, was a pupil of Ferdinand Cohn of Breslau, and his special field of study was botanical physiology. His first important publication was an investigation of the germination and first development of secale cereale or black spelt, by which he obtained the degree of Doctor at Breslau in 1870. It was followed by other studies of similar tendency in Ferdinand Cohn's "Beiträge" (contributions). In 1874 he was entrusted with the superintendence of the Botanico-Physiological Laboratory and the Botanical Gardens at Karlsruhe, and founded the periodical entitled "Botanischer Jahresbericht" (Botanical Annual), which was the first of its kind, and of which he was editor till 1885. He was also one of the editors of the *Botanische Zeitung*. He died at the age of fifty.

The Effect of Excessive Drinking on Waitresses.

The officials of the sick fund for persons employed in public-houses in Berlin have requested the Central Police Office to issue an order forbidding waitresses to sit down at the tables beside the guests, to press them to drink, and to drink with them. The petitioners declare that, though the contributors to the fund are numerous and the contributions pretty high, it is threatened with exhaustion, because it has to disburse unheard-of sums for the aid of 2500 waitresses in sickness. Most of them suffer from abdominal and stomachic complaints, and a considerable number of them are in receipt of almost uninterrupted support from the fund. The doctors unanimously attribute this epidemic to the excessive drinking of beer, cognac, &c.

Naegeli's Successors.

Professor Goebel of Giessen has been appointed Professor of Botanical Physiology, and Professor Radlkofer Professor of Systematic Botany at Munich.

Berlin, Sept. 8th.

SUPERANNUATION GRANT.—Mr. G. Ward, late medical officer for the Blyth District of the Tynemouth Union, has been granted a superannuation allowance of £39 15*s.* per annum.

SIENA.

(FROM AN ITALIAN CORRESPONDENT)

THE fourteenth Congress of the Italian Medical Association brought its sittings to a close on the 20th ult., having fixed upon Milan as the seat of the fifteenth Congress in 1894.

The Siena meeting was hardly equal to its predecessors, either in numbers or in the quality of its discussions. For one thing, it was held a month earlier than usual, so as to make its business synchronise with the great local *festa*, the time-honoured "Corse del Palio." From this cause a good many physicians and medical teachers were absent—not unreasonably reluctant to leave their summer quarters on mountain or at seaside, where they were enjoying with their families a well-earned holiday, for the dubious pleasure of discussing scientific questions amid the noise and bustle of a popular race week. Then, again, some of the best names in Medicine were figuring at the International Congress of Hygiene, or extending their sojourn in England by visits to the provincial schools. Nevertheless, there was a good deal that was novel and interesting at the meeting—as indeed could hardly be otherwise with a muster of more than three hundred practitioners, consultants, and lecturers, including Baccelli, Carruccio, Toscani, and Pasquali of Rome, Maiocchi and Riva of Parma, Massei of Naples, Marcacci of Palermo, Fabbri of Modena, Lachi and Maragliano of Genoa, Pellizzari, Romiti, and Sadun of Pisa, Bianchi of Florence, Ruata and De Paoli of Perugia, to say nothing of representatives from all the academic and industrial centres throughout the peninsula.

The published Transactions of the Congress preserve all that is of permanent value in its discussions, and absolve the reporter from the necessity of minute recapitulation. Suffice it to say that three departments, and those very important ones, of professional knowledge were left distinctly the richer for the meeting—to wit, obstetric medicine, dermo-syphilitic affections, and what your Italian *confrères* style rather cumbrously "laringo-oto-rhinoiatry." The second of these subjects had quite a field day to itself, mainly in its bearings on public health—"Sulla Profilassi Pubblica delle Malattie Veneree e Sifilitiche in Rapporto colla Prostituzione." Professor Barduzzi, the reporter in the question, had caused to be distributed a printed paper, urging on the State the enforcement of more rigorous regulations than those already operative for the control of licensed houses. Professor Pellizzari defended the *status quo*, and as one of the recognised European authorities on the subject pointed out that the regulations in force require no modification, but only a more vigilant application and surveillance. A memorial in this sense was then approved by the Congress for transmission to the Minister of the Interior.

The third of the above-mentioned subjects—laryngoscopy in its widest acceptation—evoked a good deal of special knowledge on the part of its cultivators, and, as one practical outcome of its discussion, there was proposed and carried a resolution to constitute a "Società Laringologica Italiana," devoted to the furtherance of research in the department.

Another and more comprehensive advance in the direction of what may be called "professional solidarity" was made by Professors Toscani, Ruata, and Casati, who proposed a "federation of all the various medical societies at present constituted in Italy." The project was eloquently supported by these and other speakers, but as strenuously opposed by a small minority of the meeting, headed by Professor Guzzoni of Cagliari, who saw no practical good as likely to spring from such a fusion, but advocated the retention of the "free hand" and the independence the societies already enjoyed. Put to the vote, the proposal for federation was carried by an overwhelming majority, and a commission was thereafter appointed to prepare the ground for giving it effect.

After these discussions, the features principally noteworthy in the proceedings were Professor Guido Baccelli's further investigations on Enlargement of the Spleen and on Malarial Infection. These naturally interested a large auditory, and form an important part of the published Transactions. In connexion with the Congress there was the "Exposizione," the invariable adjunct of all such meetings nowadays. On this occasion, however, it was almost wholly limited to Rural Hygiene and Sanitary Engineering, the only feature of separate interest being a very fine plan of the magnificent Policlinico at Rome, which Dr. Baccelli is working so indefatigably to bring to completion in time for the International Congress which assembles there in 1893.

AUSTRALIA.

(FROM OUR OWN CORRESPONDENT.)

Leprosy in New South Wales.

A REPORT by the secretary of the Board of Health on the above subject has just been laid before Parliament. From this it is gathered that, in accordance with the provisions of the Leprosy Act, passed last year, suitable buildings for the accommodation of lepers have been erected at Little Bay, not far from Sydney, where these unfortunate people are treated and made as comfortable as it is possible to make them. They are allowed to receive visitors, under proper precautions, and are attended by ministers of their own religious persuasion. Facilities are also given to medical practitioners to study and familiarise themselves with the characteristics of a disease which is not as yet well known or easily recognised by the majority of members of the medical profession. Since the Leprosy Act came into force last year, five cases have been reported by medical practitioners, four of which proved to be true leprosy, and the fifth a case of acute eczema. The total number of lepers under the control of the Board from 1883 to 1891 has been twenty-five, of which sixteen were Chinese, one Javanese, one West Indian negro, and seven Europeans, all of the latter being natives of New South Wales. In addition to these twenty-five cases, the Board has been made aware of two other cases of undoubted leprosy which died in private houses. Both of these cases were of European descent. One came to the colony at three years of age with his parents, who were Germans, and the other—whose brother is now in the Leper Hospital—was born in New South Wales. It will thus be seen that up to 1891 at least nine Europeans have suffered, or are still suffering, from leprosy. All these, with one exception, were born in this colony, four of German and five of British parents. As regards the Chinese lepers, there is every reason to believe that they, like the Europeans, developed the disease in the colony, although it is very probable that they may have contracted the disease in China. In the Chinese the disease appeared at times varying from six months to ten years after their arrival in New South Wales. The Europeans were not only born in the colony, but with two exceptions—a brother and sister who resided for several years in South Australia—have never left it. Cases were found in Sydney and its suburbs, at Bathurst, at Madgee, Inverell, Newcastle, the Richmond river, and other places, showing that the disease has become very widely distributed. In all cases recently reported the Board has not only caused inquiries to be made as to the history of the patients, but has directed an examination of their immediate relatives and intimate associates, with a view, if possible, of detecting and checking any spread of the disease. The Chinese make no attempt to hide or screen their fellow countrymen who are leprous, and Dr. Norton Manning, the chief medical adviser of the colony, tells us that the Chinaman is able to diagnose leprosy before the disease is discernible by a European doctor.

Enteric Fever and Diphtheria.

In Melbourne the death-rate from typhoid fever and diphtheria has diminished very much this year as compared with the preceding two years. The following is a comparative table of the deaths from these diseases during the first five months of the years 1889, 1890, and 1891 :—

Months.	Typhoid Fever.			Diphtheria.		
	1889	1890	1891	1889	1890	1891
January	71	78	25	15	25	7
February	64	73	32	13	46	9
March	91	89	36	18	56	19
April	113	63	30	26	50	11
May	92	36	20	35	39	23
Total	431	339	143	107	216	69

How much of this great decrease in mortality is due to better sanitation, and how much to the heavy rains and other climatic conditions, it is impossible to say.

Death under Chloroform.

There was a death during the month under chloroform at

the Sydney Hospital Ophthalmic Department. The patient, a fireman, aged thirty-three years, who to all appearance was a healthy man, was anæsthetised for the purpose of being operated on. During the struggling stage the cardiac action failed, and the man died in a few seconds. The Melbourne Hospital medical staff recently advised the committee of that hospital to appoint the medical and surgical registrars as instructors in anæsthetics "for the administration of chloroform and other anæsthetics, and for the instruction of the students therein." The committee, however, at their meeting on the 7th ult. refused to adopt the advice, and declined to appoint a skilled anæsthetist.

Medical News.

BRITISH MEDICAL SERVICE.—The following is a list of the successful candidates at the recent Competitive Examination for Commissions on the Medical Staff of Her Majesty's Army:—

	Marks.		Marks.
Pilcher, E. M.	3300	Alexander, J. D.	2645
Johnson, H. P.	3165	Holt, R. W. E. G.	2640
Beyts, W. G.	2970	Kelly, J. F. M.	2635
Stalkartt, H. A.	2780	Dunn, H. N.	2620
Morphew, E. M.	2710	Hughes, G. E.	2620
Fleming, C. C.	2700	Martin, C. B.	2610
Tyacke, N.	2700	Withers, S. H.	2600
Mitchell, L. A.	2690	Buchanan, G. J.	2580
Lawson, C. B.	2680	Crawford, G. S.	2550
Anderson, E. C.	2670	Hennessy, J.	2550

INDIAN MEDICAL SERVICE.—The following is a list of the candidates for Her Majesty's Indian Medical Service who were successful at the Competitive Examination held at Burlington House on Aug. 24th:—

	Marks.		Marks.
Seton, B. G.	3660	Sprague, W. C.	3200
Armstrong, W. E. A.	3264	Mitter, R. K.	3155
Elliot, R. H.	3240	Yeates, R. A.	3105

Twenty-six candidates competed for six appointments. All were reported qualified.

UNIVERSITY OF GLASGOW.—The following gentlemen have received the M.B. and C.M. degrees of this University:—

Aitken, James, Glasgow.
Anderson, Wm., Pollokshields.
Bain, Jas. G., Southsea.
Barr, J. F., B.Sc., Pollokshields.
Boyd, John A., Glasgow.
Browne, P. O. W., Rhyl.
Campbell, A., Govan, Glasgow.
Campbell, Niel, Glasgow.
Christie, David, Glasgow.
Cockburn, Samuel, Glasgow.
Coutts, D., Kintyre, Greenock.
Creighton, J. A., Hillhead.
Crichton, W., Pollockshaws.
David, J., Rhondda Valley.
Donald, Hugh C., Paisley.
Doyle, Wm., Leigh, Lancashire.
Du Cane, Herbert, London.
Ferguson, W. B. O., Lenzie.
Frew, John, Partick.
Galt, Hugh, Kilmawes.
Gilmour, John, Duntocher.
Girvan, D. W., Maybole, Ayrshire.
Goldie, A., Darvel, Ayrshire.
Green, J. A., Galston, Ayrshire.
Hamilton, R., Coatbridge, N.B.
Hamis, Yousuf, Nazareth, Syria.
Henderson, Robt. H., Glasgow.
Inglis, A., Dowanhill, Glasgow.
James, Robt., Glasgow.
Jones, John H., Llangeler.
Jones, O. G., Penmachno.
Kilpatrick, Robt R., Paisley.
Laird, Peter A., Glasgow.
Lavery, Chas., Dumbarton.
Lloyd, D., Llanrhaiadr, Denbigh.
Lochhead, M., B.Sc., Paisley.
Logie, John W., Glasgow.
Malcolm, R. M., Glamis, Forfar.
Marr, James, Coylton-by-Ayr.
Marsh, E. L., Langside, Glasgow.
Martin, Thos. M., Blantyre.
Mason, Wm., Strathaven.
Mathie, John W., Glasgow.
Miller, J., Stewarton, Ayrshire.
Moir, Robt. W., Glasgow.
Muir, David, Dumbarton.
Muir, J. K., Maybole, Ayrshire.
Murray, Wm., Coatbridge, N.B.
Macdougall, Dugald, Newhaven.
Macfarlane, D. N., Tiree-by-Oban.
M'Ghie, Robert, Rugeley.
M'Gregor, John, Ayr.
M'Ilwraith, Charles H., M.A., Bishopton, Renfrewshire.
Macintyre, Neil, Glasgow.
M'Kendrick, W. J., B.Sc., Glasg.
M'Kenzie, Daniel, Larkhall.
M'Leod, Alex. L., M.A., Partick.
Navin, Robt. W., Johnstone.
Naismith, Jas. H., Hamilton.
Park, Gilbert, Kilsyth.
Park, Hugh H., Kilsyth.
Park, Wm., Beith, Ayrshire.
Paton, Robt. A., Hamilton.
Riddell, Brownlow, Partick.
Robertson, Andrew, Paisley.
Robertson, Robt. C., M.A., Kilmarnock.
Sanders, Archd. G., Lockerbie.
Scott, A. T., M.A., Glasgow.
Sharp, Robert, Greenock.
Smith, D., Cumnock, Ayrshire.
Stewart, G. C., Kelvindale.
Stobo, Robt., Uddingston.
Sydenham, Geo. M., Exmouth.
Symington, C., Kirkconnel.
Taylor, D. M., M.A., Rosneath.
Temple, Lewis D., Ballantrae.
Todd, James, Glasgow.
Turner, Ebenezer, Kirkcaldy.
Wallace, Wm. T. M., Dowanhill.
Watson, D., Hillhead, Glasgow.
Watson, Wm., Strathaven.
White, Jas. L., Coathill, N.B.
Whyte, Martin, Rutherglen.
Wilson, Jas. Allan, Glasgow.
Wilson, Robt., Glasgow.
Yuill, John, Tannocnside.

PHARMACEUTICAL SOCIETY OF IRELAND.—At the quarterly registered Druggist Licence Examination held on the 3rd inst., the following candidates passed:—R. Canavan, E. H. Collopy, J. Curry, P. D. Cussen, J. Fleming, J. Leavy, T. Morris, A. Murphy, J. J. Murphy, J. Shirley, R. L. Taylor, J. J. White.

RESIGNATION OF THE CHIEF INSPECTOR OF FACTORIES.—The resignation is announced of Mr. A. Redgrave, C.B., after fifty-seven years of useful labours in the public service.

THE SANITARY INSTITUTE.—At an examination held at Stafford on August 28th and 29th, 47 candidates presented themselves, of whom 35 were certified to be competent, as regards their sanitary knowledge, to discharge the duties of Inspector of Nuisances.

PRESENTATION.—On the 27th ult., the friends of Mr. E. Snell, M.R.C.S., presented him, on the occasion of his leaving Ketton, with a handsome silver tea and coffee service, a massive silver tray, and a liqueur stand, as a mark of the esteem with which they regarded him.

ST. JOHN AMBULANCE ASSOCIATION.—H.R.H. the Prince of Wales has appointed the Earl of Limerick Director of the Ambulance Department of the Order of the Hospital of St. John of Jerusalem in England. Since the opening of the last winter session on October 1st, over 28,000 first aid and nursing certificates have been issued.

BATH.—The Pump-room Committee have decided to make some improvements in the arrangements at the Royal Baths. It is proposed to supply the mineral water for drinking purposes in the octagon vestibule and to have a constant stream of water in the Grand Pump-room. To supply water in this way a small steam pump will be used as well as to fill the baths directly from the spring. A vote of £218 is required in order to carry out these improvements.

FOOTBALL ACCIDENT.—At St. Helens on Saturday afternoon last a somewhat serious accident occurred during the St. Helens *v.* Ulverston football match. Towards the close of the game some scrimmaging took place in the centre, and after one of the packs, Greenough, one of the St. Helens forwards, was left lying unconscious on the ground. He was carried into the dressing tent, and Dr. Watson subsequently stated that Greenough's skull was fractured. The doctor temporarily bound up the head, and the sufferer was removed home in a cab. It was stated later that the injury was not a very dangerous one, and recovery was likely to ensue.

DEATH UNDER CHLOROFORM AT THE BIRMINGHAM GENERAL HOSPITAL.—Last week a lad fourteen years of age was admitted to the hospital in consequence of having received an injury to the head which necessitated the performance of the operation of trephining. The boy, however, died soon after the administration of chloroform. Mr. James Lea, senior house surgeon at the hospital, at the inquest held two days afterwards, deposed that he examined the deceased preparatory to administering chloroform, and deemed him a fit subject for the anæsthetic. Chloroform having been administered, Dr. Jolly and himself commenced the operation. About ten minutes afterwards the deceased became faint, and his breathing ceased. Attempts were made to restore respiration, and were to some extent successful, but the heart's action suddenly ceased. The post-mortem examination revealed the fact that the brain was lacerated, and that there was a quantity of blood near the wound. The cause of death was syncope resulting from the effects of chloroform, but accelerated by the injury to the brain. A verdict of "Accidental death" was returned.

VOLUNTEER AMBULANCE SCHOOL OF INSTRUCTION. The next course of lectures on the subjects of the Proficiency Examination for Volunteer medical officers will be given at the headquarters of the 2nd Middlesex Artillery Volunteers, Leonard-street, City-road, by permission of Colonel M. B. Pearson, commencing on Sept. 28th, at 2.30 P.M. Officers desirous of joining, or obtaining further information about the class, should apply to Surgeon R. R. Sleman, M.A., 7, St. Benet-place, Gracechurch-street, E.C. The following members of the school have recently passed the Proficiency Examination:—Surgeons: F. P. P. Ransom, M.D., 3rd V.B. Suffolk Regt.; J. H. Hough, M.A., Cambridge University Rifles; R. J. Maitland Coffin, F.R.C.P., 3rd V.B. the "Queen's" Royal West Surrey Regt.; Edgar Hughes, F.R.C.S., London Rifle Brigade; G. W. Trench, F.R.C.S., 3rd Middlesex R.V. Acting Surgeons: C. Swaby Smith, 2nd Cadet Batt. "Queen's" Royal West Surrey Regt.; G. Okell, 3rd V.B. Cheshire Regt.; A. H. Marsh, 3rd V.B. Cheshire Regt.; Tatham Thompson, M.B., 3rd V.B. Welsh Regt.; D. Rice, 1st Worcester Artillery Volunteers; J. A. Rigby, M.D. Lond., 5th Lancashire Artillery Volunteers.

ADULTERATION.—At the Agricultural Congress at the Hague a resolution was passed with a view of securing a more efficient enforcement of the existing law, and of obtaining future legislation directed against the adulteration of food stuffs.

Appointments.

Successful applicants for Vacancies, Secretaries of Public Institutions, and others possessing information suitable for this column, are invited to forward it to THE LANCET *Office, directed to the Sub-Editor, not later than 9 o'clock on the Thursday morning of each week for publication in the next number.*

ACKERY, J., M.R.C.S., L.D.S., has been appointed Dental Surgeon to St. Bartholomew's Hospital.

ADAM, JOHN LAW, M.B., C.M. Aberd., has been appointed House Surgeon to the Gloucester General Infirmary and Eye Institution, vice John Forrester Wood, M.R.C.S., resigned.

ALLAN, FRANCIS J., M.D. Edin., D.P.H. Camb., has been appointed Medical Officer of Health to the Vestry of St. Leonard, Shoreditch.

ANDREWS, J. R., M.R.C.S., L.S.A., has been appointed Medical Officer of Health for the Quickmere Urban Sanitary District, Township of Saddleworth.

ATKEY, P. J., L.R.C.P., M.R.C.S., has been reappointed Clinical Assistant for Diseases of the Throat to St. Thomas's Hospital.

BANKS, A., L.R.C.P., M.R.C.S., has been appointed Junior Obstetric House Physician to St. Thomas's Hospital.

BOX, C. R., B.Sc. Lond., L.R.C.P., M.R.C.S., has been reappointed Resident House Physician to St. Thomas's Hospital.

BECKETT, S. TAITE, L.R.C.P., L.R.C.S., L.F.P.S., has been appointed Assistant Surgeon to the North Liverpool Dispensary.

CARROLL, JOSEPH, M.B., C.M. Glasg., has been appointed Medical Officer of Health for the Ilkeston Urban Sanitary District of the Basford Union.

CHALLINOR, H. S., M.R.C.S., L.S.A., has been appointed Medical Officer and Public Vaccinator to the North-Eastern and South-Eastern Districts of the Buntingford Union.

CHEPMELL, CHARLES, M.D., M.R.C.S., has been appointed Honorary Surgeon in ordinary to the Brighton and Hove Hospital for Women.

COBBETT, L., F.R.C.S., L.R.C.P., has been appointed House Surgeon to St. Thomas's Hospital.

FORBES, ARTHUR D., M.B., C.M. Aberd., has been appointed Assistant Medical Officer to the Grove Hall Asylum, Bow, E.

FORDE, T. A. M., L.R.C.P., M.R.C.S., has been appointed Assistant House Surgeon to St. Thomas's Hospital.

HARPER, J. R., L.R.C.P., M.R.C.S., has been appointed House Surgeon to St. Thomas's Hospital.

HAYDON, T. H., B.A., M.B., B.C. Cantab., L.R.C.P., M.R.C.S., has been appointed House Surgeon to St. Thomas's Hospital.

HOWARD, HENRY, M.B. Camb., M.R.C.S., has been appointed Government Health Officer at Williamstown, South Australia.

JOHNSON, SAMUEL, M.D., M.Ch., has been appointed Medical Officer and Public Vaccinator for the Stoke District of the Stoke-upon-Trent Parish; also Medical Officer of Health for the Stoke-upon-Trent Borough, vice M. H. Ashwell, deceased.

JONES, RICHD., M.R.C.S., L.R.C.P. Lond., has been appointed Assistant Medical Officer to the Bethnal-green Infirmary, Victoria-park, E.

KELLOCK, T. H., M.A., M.B., B.C. Cantab., F.R.C.S., L.R.C.P., has been reappointed Resident House Physician to St. Thomas's Hospital.

KROUGH, T. H., L.R.C.P., L.R.C.S. Irel., has been appointed Medical Officer for the Shifnal Union.

LOWNDS, CHAS. JAS., B.A. Cantab., L.R.C.P. & S. Edin., L.F.P.S. Glasg., has been appointed Medical Officer and Public Vaccinator for the Kirkburton District of the Huddersfield Union; also Medical Officer of Health for the Urban Sanitary District of Whitley Upper, vice G. A. Hawkins-Ambler, resigned.

LUCY, SIDNEY H. R., M.R.C.S., L.R.C.P., has been appointed House Surgeon to the County and County of the Borough Infirmary, Carmarthen.

MACKENZIE, THOMAS, M.A., M.D. Edin., has been appointed Deputy Surgeon to Government House, to the Isle of Man Gaol, and to the Police, Douglas, Isle of Man, vice Ernest Black, resigned.

MILTON, W. F. E., L.R.C.P., M.R.C.S., has been appointed Assistant House Surgeon to St. Thomas's Hospital.

MOORE, SAMSON GEORGE, M.B. Vict., Ch.B., has been appointed Assistant Medical Officer to the Leeds Workhouse Infirmary.

POLSON, G. Y., M.A., M.B., C.M., has been appointed Medical Officer for the Farnsfield and Southwell Districts and the Workhouse of the Southwell Union.

POWERS, C. H., L.R.C.P. Lond., M.R.C.S., has been appointed Medical Officer for the Gosport District of the Whitehaven Union.

PURVIS, W. P., L.R.C.P., M.R.C.S., has been appointed Clinical Assistant for Diseases of the Ear to St. Thomas's Hospital.

REYNELL-BELLAMY, H., L.R.C.P., L.R.C.S. Edin., L.F.P.S. Glasg., has been appointed House Surgeon to the Stockport Infirmary, vice T. W. Adams.

SCOTT, A. W., M.D. Brux., M.R.C.S., L.S.A., has been appointed Medical Officer for the Handsworth District of the Sheffield Union.

SHEARER, D. F., B.A., B.M., B.Ch. Oxon., has been appointed Non-resident House Physician to St. Thomas's Hospital.

STILWELL, G. R. F., L.R.C.P., M.R.C.S., L.S.A., has been reappointed Non-resident House Physician to St. Thomas's Hospital.

STOKES, W. G. G., B.A., M.B., B.C. Cantab., L.R.C.P., M.R.C.S., has been appointed Senior Obstetric House Physician to St. Thomas's Hospital.

UMNEY, W. F., L.R.C.P., M.R.C.S., has been appointed Clinical Assistant for Diseases of the Skin to St. Thomas's Hospital.

WICKHAM, G. H., B.A., M.B., B.C. Cantab., M.R.C.S., L.R.C.P. Lond., has been appointed House Surgeon and Secretary to the Royal Victoria Hospital, Bournemouth, vice Theodor Lund, M.B., B.S. Durh., resigned.

WILLETT, GEO. G. DRAKE, M.R.C.S., has been reappointed Medical Officer to the Bitton and Marksbury Districts of the Keynsham Union.

WYMAN, C., M.A., M.B., B.C. Cantab., L.R.C.P., M.R.C.S., has been appointed House Surgeon to St. Thomas's Hospital

Vacancies.

For further information regarding each vacancy reference should be made to the advertisement.

A. B., Box 1739, Sell's Advertising Offices, London.—Resident Medical Man for a Hydropathic Establishment.

BRITISH HOSPITAL FOR MENTAL DISORDERS, 208, Euston-road.—Two additional Physicians.

CHARING-CROSS HOSPITAL, Strand, W.C.—Surgical Registrar. Salary £40 per annum.

CITY OF LONDON HOSPITAL FOR DISEASES OF THE CHEST, Victoria-park, E.—House Physician for six months. No salary. Board and residence provided.

EASTERN COUNTIES' ASYLUM FOR IDIOTS, Colchester.—Wanted, a Resident Medical Attendant. Salary £100 per annum, with furnished apartments, board, and washing.

GREAT NORTHERN CENTRAL HOSPITAL, Holloway-road, N.—Anæsthetist.

HALIFAX INFIRMARY AND DISPENSARY.—Assistant House Surgeon. Salary £50 per annum, with residence, board, and washing.

HULL FRIENDLY SOCIETIES' MEDICAL INSTITUTION.—Resident Medical Officer. Salary £150 per annum, with Midwifery fees, house, coals, and gas. (Apply to the President, Mr. Thos. Garbutt, 107, Argyll-street, Hull.

KENT COUNTY ASYLUM, Barming-heath, Maidstone.—Senior Assistant Medical Officer. Salary £250 per annum, increasing by two annual instalments of £25 each to £300, with furnished quarters, attendance, coals, gas, washing, garden produce, and milk.

KING'S COLLEGE, London.—Demonstratorship of Bacteriology.

LEICESTER UNITED FRIENDLY SOCIETIES' MEDICAL ASSOCIATION. 114, High Cross-street, Leicester.—Second Medical Officer. Salary £200 per annum, with Midwifery fees.

PINXTON COLLIERIES.—Resident Surgeon. Salary £300 per annum.

PLYMOUTH BOROUGH ASYLUM.—Assistant Medical Officer. Salary £125 per annum, to be raised by five equal annual increments to £150 per annum, with furnished apartments in the Asylum, and board and washing free.

ROYAL NATIONAL HOSPITAL FOR CONSUMPTION, Ventnor, Isle of Wight. Resident Medical Officer. Salary £100 per annum, with board and lodging in the Hospital. (Apply to the Board of Management, at the London office, 34, Craven-street, Charing-cross.)

ROYAL PORTSMOUTH HOSPITAL.—Junior House Surgeon for six months. Board, washing, and residence in the Hospital, and an honorarium of 15 guineas at expiration of term of office.

ROYAL SURREY COUNTY HOSPITAL.—Clinical Assistant under the House Surgeon for six months. Board, lodging, and washing provided.

STOURBRIDGE DISPENSARY.—House Surgeon and Secretary. Salary £130 per annum, with furnished rooms, coals, and gas, and an extra allowance (amounting for several years past to £25 per annum) for travelling expenses.

WESTERN OPHTHALMIC HOSPITAL, Marylebone-road, W. — Assistant Surgeons.

WESTMINSTER HOSPITAL, Broad Sanctuary, S.W.—Second Dental Surgeon.

Births, Marriages, and Deaths.

BIRTHS.

COVENTON.—On Sept. 4th, at Indore, Pevensey-road West, St. Leonards, the wife of Charles Arthur Coventon, M.R.C.S., L.R.C.P., of a daughter.

DODD.—On Sept. 1st, at Goldstone Villas, West Brighton, the wife of Arthur H. Dodd, L.R.C.P., M.R.C.S., of a daughter.

KENYON.—On Aug. 31st, at Hooton-Pagnell, near Doncaster, the wife of G. Herbert Kenyon, M.D., of a daughter.

POLLARD.—On Sept. 1st, at Midsomer Norton, Somerset, the wife of G. S. Pollard, L.R.C.P., M.R.C.S., of a son.

MARRIAGES.

CANT—TURNER.—On Sept. 8th, 1891, at All Saints', Margaret-street, W., by the Very Rev. the Dean of Lincoln, assisted by the Rev. Edward Bate, Curate of All Saints', William John Cant, M.R.C.S., L.R.C.P., Lincoln, to Ethel Mary Florence Turner, only child of the late John Turner, Esq., Pendlebury, Manchester, and granddaughter of the late James Aspinall Turner, Esq., M.P., D.L., Manchester. No cards.

JUCKES—DARNELL.—On Sept. 3rd, at St. Seiriol's, Penmaenmawr, Frank Ambrose Juckes, M.B., of Horsham, to Henrietta Mary, third daughter of the Rev. Charles Darnell, of Cargilfield, Edinburgh, and of Plas Ucha, Penmaenmawr.

MILNES—D'HAVET.—Hey Charles Edward Milnes, of Leeds, to Adeline, daughter of the Marchese D'Havet (Zuccardi).

SCOTT—MARTIN.—On Sept. 5th, at Christ Church, Ealing, by the Rev. J. S. Hilliard, Charles Walter Scott, M.B. Edin., M.R.C.S. Eng., L.R.C.P. Lond., to Cara Edith Martin.

WEIR—HILL.—On Sept. 2nd, at Holy Trinity Church, Malvern, Archibald M. Weir, L.R.C.P. and S. Edin., of St. Giles', Malvern Link, son of Dr. Weir, of Malvern, to Edith Rosa, third daughter of R. P. Hill, Esq., of Goodrest, Malvern.

DEATHS.

GARNHAM.—On Aug. 28th, at Smalley, Derbyshire, G. J. W. Garnham, L.R.C.P. Edin., aged 31.

HATCHARD.—On Sept. 7th, at Bryn-Teg, Llandudno, Frank Hatchard, F.R.C.S., late of Ebury-street, aged 71.

LLOYD.—On Sept. 4th, at Hungerberry, Shanklin, Isle of Wight, David Lloyd, M.R.C.S., L.S.A., aged 76.

WILSON.—On Sept. 4th, at Johnstone, N.B., James Wilson, M.D. Glasg. aged 44.

N.B.—A fee of 5s. is charged for the Insertion of Notices of Births, Marriages, and Deaths.

BRITISH AND INDIAN MEDICAL SERVICES.

THE following is the list of questions submitted to candidates at the late examination for Her Majesty's Army and Indian Medical Services:

Chemistry.—1. In illustration of the law of multiple proportions write down the series commencing with hydrochloric acid and continued by the oxy-acids of chlorine. 2. Mention some test by which the presence of sulphuric acid may be detected. 3. By what process may oxygen be prepared from potassium chlorate? Give the equation which expresses the reactions which take place in this process.

Surgery.—1. Describe the causes, the course, and the results of acute and chronic periostitis, and the difference of treatment under each condition. 2. What are the general characteristics by which epithelioma may be usually diagnosed? Describe its minute structure. State if there are any conditions which may influence its commencement, and what are the tissues most frequently attacked. 3. What are the most frequent fractures of the bones of the forearm, near the wrist? Do they ever implicate the articular surfaces? Describe the necessary treatment in these injuries, and state what permanent defects are occasionally found to result from these accidents. 4. Describe the condition known as phagadæna, to what causes it is to be attributed, and the treatment to be employed in the attack. Is it ever liable to be followed by a fatal result, and to what cause may such fatality be occasionally due? 5. What are the most common dislocations of the ankle-joint? Describe the position of the foot in either case, the complications which usually attend or follow such injuries, and the treatment to be pursued under these varying conditions. 6. A patient is the subject of an old hydrocele, with thickened walls; or of hæmatocele of some long standing; or for years has had a large irreducible inguinal hernia. State the symptoms by which each case may be pretty correctly diagnosed, and the treatment to be adopted in either condition.

Anatomy and Physiology.—1. Describe the hip-joint, giving an account of the bones, ligaments, and all other tissues which enter into its formation. 2. Give a description of the origin, course, and anatomical relations of the internal iliac artery. Describe also its principal branches, and trace their distribution. 3. Describe the pancreas, giving an account of its anatomical relations, histology, and functions; the pancreas fluid and its physiological action. 4. Describe the origin, relations, distribution, and connexion of the glosso-pharyngeal nerve and its branches; give an account also of its functions. 5. Describe the parts met with in a dissection of the axilla, giving an account of them in the order in which they are exposed.

Medicine.—1. A case given for analysis and commentary. 2. Write what you know about the natural history of diphtheria, limiting your statements to the consideration of (*a*) the causation of this disease, and (*b*) the measures for its prevention or prophylaxis. 3. Give the chief physical signs of the following pulmonary diseases, and mention the chief points of differential diagnosis: Pleurisy with effusion; pulmonary apoplexy; acute lobar pneumonia; acute pulmonary phthisis (with rapid softening). 4. Write what you know about the antiseptic treatment of enteric fever, giving examples of the method and the mode of prescribing the antiseptics used. Describe the effects which result from such treatment when successful. 5. The following preparations (amongst others) have been added recently to the British Pharmacopœia, having been in more or less popular use for several years—viz., "antifebrin," now officially named "acetanilidum"; "antipyrin," now officially named "phenazonum"; "paraldehyde," now officially named "paraldehydum"; "strophanthus"; "sulphonal." State what you know regarding the medicinal properties of each of these, the official preparations of them, the uses to which they have been put, and the doses of each of them.

Natural Science.—In Zoology: 1. What are the classes of the vertebrata? Group these classes in accordance with the presence or absence of an amnion during development. 2. By what characters is the mammalian fauna of Australia specially distinguished? 3. Refer the following to their sub-kingdoms, classes, and orders, respectively: Porpoise, pearly nautilus, water-newt, viper, locust, and starfish. In Botany: 4. What is a syncarpous, and what is an apocarpous ovary? Cite one or more examples of each from genera contained in the Pharmacopœia. 5. Contrast the structure of a grain of wheat with that of a bean. 6. Refer to its natural order a plant with the following characters, and give one or more examples: Leaves alternate; inflorescence without bracts; calyx with five united sepals, persistent; corolla regular, gamopetalous, 5-lobed, plaited in the bud; stamens, five inserted on the corolla, and alternate with its lobes; ovary 2-celled, with axile placenta; seeds numerous, albuminous. In Physics: 7. What is meant by the mechanical equivalent of heat? 8. What is meant by the "Law of the Sines" as applied to the refraction of light? 9. What is the chief difference between a so-called continental climate and a so-called insular climate.

METROPOLITAN ASYLUMS BOARD.

Return of Patients remaining in the several Fever Hospitals of the Board at Midnight on September 8th, 1891.

Hospital.	Beds occupied.						Total accommodation.
	Scarlet fever.	Diphtheria.	Typhus fever.	Enteric fever.	Other diseases.	Total.	
Eastern Hospital	140	59	1	72	—	272	442
North-Western Hospital	165	49	..	19	1	225	443
Western ,,	122	17	..	8	1	148	224
South-Western ,,	155	15	..	10	..	180	340
South-Eastern ,,	181	11	3	16	3	214	462
Northern ,,	190	32	..	19	..	241	480
Totals	953	174	4	144	5	1280	2391

METEOROLOGICAL READINGS.

(Taken daily at 8.30 a.m. by Steward's Instruments.)

THE LANCET Office, Sept. 10th, 1891.

Date.	Barometer reduced to Sea Level and 32° F.	Direction of Wind.	Dry Bulb.	Wet Bulb.	Solar Radia in Vacuo.	Maximum Temp. Shade.	Min. Temp	Rainfall.	Remarks at 8.30 A.M.
Sept. 4	30·05	S.W.	59	55	116	70	53	·02	Bright
,, 5	30·16	S.W.	58	55	91	70	52	..	Bright
,, 6	30·14	N.W.	61	55	105	67	51	..	Bright
,, 7	29·95	N.W.	57	54	84	68	54	·11	Overcast
,, 8	30·13	W.	62	58	112	76	56	..	Bright
,, 9	30·18	S.W.	63	59	118	81	56	..	Foggy
,, 10	30 17	E.	65	61	114	82	59	..	Foggy

Medical Diary for the ensuing Week.

Monday, September 14.

ST. BARTHOLOMEW'S HOSPITAL.—Operations, 1.30 P.M., and on Tuesday, Wednesday, Friday, and Saturday at the same hour.

ROYAL LONDON OPHTHALMIC HOSPITAL, MOORFIELDS.—Operations daily at 10 A.M.

ROYAL WESTMINSTER OPHTHALMIC HOSPITAL.—Operations, 1.30 P.M., and each day at the same hour.

CHELSEA HOSPITAL FOR WOMEN.—Operations, 2.30 P.M.; Thursday, 1.30.

HOSPITAL FOR WOMEN, SOHO-SQUARE.—Operations, 2 P.M., and on Thursday at the same hour.

METROPOLITAN FREE HOSPITAL.—Operations, 2 P.M.

ROYAL ORTHOPÆDIC HOSPITAL.—Operations, 2 P.M.

CENTRAL LONDON OPHTHALMIC HOSPITAL.—Operations, 2 P.M., and each day in the week at the same hour.

UNIVERSITY COLLEGE HOSPITAL.—Ear and Throat Department, 9 A.M.; Thursday, 9 A.M.

Tuesday, September 15.

KING'S COLLEGE HOSPITAL.—Operations, 2 P.M.; Fridays and Saturdays at the same hour.

GUY'S HOSPITAL.—Operations, 1.30 P.M., and on Friday at same hour. Ophthalmic Operations on Monday at 1.30 and Thursday at 2 P.M.

ST. THOMAS'S HOSPITAL.—Ophthalmic operations, 4 P.M.; Friday, 2 P.M.

ST. MARK'S HOSPITAL.—Operations, 2 P.M.

CANCER HOSPITAL, BROMPTON.—Operations, 2 P.M.; Saturday, 2 P.M.

WESTMINSTER HOSPITAL.—Operations, 2 P.M.

WEST LONDON HOSPITAL.—Operations, 2.30 P.M.

ST. MARY'S HOSPITAL.—Operations, 1.30 P.M. Consultations, Monday, 2.30 P.M. Skin Department, Monday and Thursday, 9.30 A.M. Throat Department, Tuesdays and Fridays, 1.30 P.M. Electro-therapeutics, same day, 2 P.M.

Wednesday, September 16.

NATIONAL ORTHOPÆDIC HOSPITAL.—Operations, 10 A.M.

MIDDLESEX HOSPITAL.—Operations, 1 P.M. Operations by the Obstetric Physicians on Thursdays at 2 P.M.

CHARING-CROSS HOSPITAL.—Operations, 2 P.M., and on Thursday and Friday at the same hour.

ST. THOMAS'S HOSPITAL.—Operations, 1.30 P.M.; Saturday, same hour.

LONDON HOSPITAL.—Operations, 2 P.M. Thursday & Saturday, same hour.

ST. PETER'S HOSPITAL, COVENT-GARDEN.—Operations, 2 P.M.

SAMARITAN FREE HOSPITAL FOR WOMEN AND CHILDREN.—Operations 2.30 P.M.

GREAT NORTHERN CENTRAL HOSPITAL.—Operations, 2 P.M.

UNIVERSITY COLLEGE HOSPITAL.—Operations, 1.30 P.M.; Skin Department, 1.45 P.M.; Saturday, 9.15 A.M.

ROYAL FREE HOSPITAL.—Operations, 2 P.M., and on Saturday.

CHILDREN'S HOSPITAL, GREAT ORMOND-STREET.—Operations, 9.30 A.M. Surgical Visits on Wednesday and Saturday at 9.15 A.M.

Thursday, September 17.

ST. GEORGE'S HOSPITAL.—Operations, 1 P.M. Surgical Consultations, Wednesday, 1.30 P.M. Ophthalmic Operations, Friday, 1.30 P.M.

UNIVERSITY COLLEGE HOSPITAL.—Operations, 2 P.M.; Ear and Throat Department, 9 A.M.

Friday, September 18.

ROYAL SOUTH LONDON OPHTHALMIC HOSPITAL.—Operations, 2 P.M.

Saturday, September 19.

MIDDLESEX HOSPITAL.—Operations, 2 P.M.

UNIVERSITY COLLEGE HOSPITAL.—Operations, 2 P.M.; and Skin Department, 9.15 A.M.

Notes, Short Comments, & Answers to Correspondents.

It is especially requested that early intelligence of local events having a medical interest, or which it is desirable to bring under the notice of the profession, may be sent direct to this Office.

All communications relating to the editorial business of the journal must be addressed "To the Editors."

Lectures, original articles, and reports should be written on one side only of the paper.

Letters, whether intended for insertion or for private information, must be authenticated by the names and addresses of their writers, not necessarily for publication.

We cannot prescribe or recommend practitioners.

Local papers containing reports or news paragraphs should be marked and addressed "To the Sub-Editor."

Letters relating to the publication, sale, and advertising departments of THE LANCET *to be addressed "To the Publisher."*

We cannot undertake to return MSS. not used.

OUR STUDENTS' NUMBER.

THE following hospitals affording facilities for clinical study and instruction were from want of space omitted from our Students' Number last week:—

The Children's Hospital, Moor Edge, Newcastle-on-Tyne. — This hospital contains 60 beds, and has a large out-patient department. The medical staff visit the hospital daily, and clinical instruction is given. Clerkships and dresserships are open to students. Operations twice a week.

Glasgow Eye Infirmary, Berkeley-street.—This hospital affords a large field for the study of Ophthalmology. Students should apply for information regarding fees and hours of attendance to Mr. William George Black, Secretary, 88, West Regent-street, Glasgow.

F. A. C.—The treatment of eye disease in ancient Egypt was a highly honoured specialty, as may be gathered from the Papyrus Ebers. See the "Abhandlungen der Königl. Sächs. Gesellschaft der Wissenschaften zu Leipzig," vol. xi., 1890, under the title "Georg Ebers: Papyrus Ebers. Die Maase und das Kapitel über die Augenkrankheiten," in two parts.

Pasce.—A statement obtained currency in the newspapers that such a notice as that mentioned by our correspondent was affixed to the outer wall of a London hospital, but the report was found on inquiry to be untrue. We certainly do not know of any scientific ground for the notion that the eating of raw tomatoes is favourable to the development of neoplasms of any kind.

A Reader.—1. The British qualification is naturally held in most esteem in the United Kingdom.—2. The information is contained in our Students' Number, published last week, and will be found on p. 547.

Medical Officer of Health.—Surely the matter is one to be settled by agreement.

CHARITY VOTING REFORM.

To the Editors of THE LANCET.

SIRS,—For some years past the majority of the London press have been good enough to call the attention of the public to the operations of this Society, which has for its objects the abolition of the system of election to the benefits of many of the principal London charities by the votes of the subscribers, a system which unfortunately carries with it the necessity for canvassing. This voting and canvassing system imposes great hardships, delay, and expense upon the poor candidates and their friends, and perhaps one of the worst features of it is that those who have wealthy friends, who are able to buy votes and to pay a large sum for printing and posting of appeals to the governing bodies, succeed in the elections, whereas the really poor and friendless in most instances have to wait for years before being elected, and perhaps ultimately fail. It is the opinion of the great philanthropists who have studied this subject that the voting system is cruel, unjust, and unnecessary, and that the time has now arrived when it should be entirely abolished. As the subscribers to the voting charities, scattered as they are all over the country, do not know anything of the individual candidates, this committee suggests that voting and canvassing should cease to exist, and that all elections should be made by the managers of the charities themselves, after a careful comparison of the relative merits of the candidates. Nothing can satisfy the great bulk of those who have given the subject their careful attention but the total abolition of the system, and it is hoped that with the kind assistance of the press this may gradually be effected.

I am, Sirs, your obedient servant,

J. A. DOW,
Secretary, Charity Voting Reform Association.

Charing-cross, S.W., Sept. 9th, 1891.

A PÆAN IN HONOUR OF ÆSCULAPIUS.

"DE NOVO Pæane in Honorem Æsculapii facto" is the title of a paper by Herr Ziebarth of Göttingen, contributed to the "Commentationes" of the Seminarium Philologicum of Munich, just out. The ode, written in the dactylic metre employed for such compositions by the Greek tragedians, is addressed to Æsculapius by the town of Ptolemais, the modern Menshieh, in Egypt—addressed, moreover, on behalf of the Emperor Trajan, for the recovery of whose health the townsfolk vow to the god and his daughter, Hygeia, a restoration of their temple and glebe (τέμενος). Well engraved on stone and admirably reproduced by photography, the ode may be referred to the seventh year of Trajan's reign (A.D. 104), the "titulus" inscribed over it setting forth that Pompeius Planta was then Prefect of Egypt, as we know from one of Pliny's letters to the Emperor to have been the case. It is possible, however, as Herr Ziebarth suggests, that though published in that year, the ode may have been written long before, as it follows closely on the lines of another "pæan," addressed to Apollo, reproducing the same invocation, the same prayer, and the same metrical form. As a specimen of official poetry, it has much interest for the student of the history of medicine, as will be found by anyone who can give an hour to the admirable Latinity of Herr Ziebarth's paper.

A. M.—The terms of Sub-section 2 of Section 18 of the Local Government (England and Wales) Act, 1888, do not seem open to any misunderstanding. In so far as medical officers of health are concerned who seek office in districts or combinations of districts which at the 1891 census had populations of less than 50,000 Sub-section 2 does not apply. But all seeking office for any county, any district, or any combination of districts having a population of 50,000 or more, must either hold a diploma in Public Health or they must have served as medical officer of health for three consecutive years before Jan. 1st, 1892, in a district or combination of districts having at the last census a population of not less than 20,000 inhabitants.

M.R.C.S.—If our correspondent will forward us fuller particulars of the case, we shall be happy to give the matter due consideration.

Tyro.—Full information of the curriculum of the College will be found in our Students' Number, published last week.

Messrs. Arnold and Sons.—It seems hardly desirable to renew the controversy.

A CASE OF EMPYEMA OF THE ANTRUM.

To the Editors of THE LANCET.

SIRS,—Empyema of the antrum is often a very troublesome business and causes a good deal of anxiety to the patient, and not unfrequently tries the patience of the surgeon. Its chronic course is usually long, and simple measures are seldom of much value Whether caries of the teeth is the common cause of this affection or not, we know for certain that it does cause it. Dr. Hunter Mackenzie, in THE LANCET, ably remarked that in treating this disease it is a mistake to suppose that extraction of teeth and perforation and washing out of the antrum are likely to lead to a speedy cure. The record of a case which yielded to the simplest measures, notwithstanding its chronic nature, which was of more than twelve months' standing, will not be out of place.

The patient, a Jewish boy, presented himself to me with a fistula in the cheek of more than a year's standing. After examining the boy, I concluded that it was owing to empyema of the antrum. The corresponding teeth were examined, and, although no decided signs of caries could be detected, I extracted the first and second molars. A piece of the alveolar process came off with the former, which was quite sound; but after examining the latter it was found to be perforated with minute canals full of pus, and running through the whole length of it, beginning in the roots, which must have been in direct communication with the floor of the cavity. As there was at hand at the time no gimlet or any other instrument which would have been serviceable in this case, I attempted no more, and dismissed the lad with a solution of boracic acid, and asked him to come to me again soon, as I thought something more ought to be done. A few days later the boy again made his appearance, and to my astonishment seemed all right; the fistula had healed up, and the empyema of the cavity had subsided. This case presents two points of interest: first, that the discharge should make its way through the bony walls of the antrum, however thin they may be, and burrow through the muscles of the face, while it could have more easily escaped through the mucous membrane in the internal wall to the nasal cavity; and second, that the disease, notwithstanding its chronic character, should yield to such simple measures within a very short time.

I am, Sirs, yours respectfully,

KHALIL SA'ADI, M.D.

Safed, Palestine, Scotch Medical Mission, Aug. 20th, 1891.

Comme il faut.—There is no inflexible rule. It is well to follow the custom which has been heretofore observed in the district.

Mr. A. G. Mossop.—The Secretaries of the Society are Dr. J. Anderson, 41, Wimpole-street, and Mr. Silcock, 52, Harley-street.

Mr. J. H. Dauber is thanked for his communication, which arrived too late for consideration in this year's Students' Number.

"EARTH TO EARTH" BURIAL AND CREMATION.

To the Editors of THE LANCET.

SIRS,—In the necessarily abridged report of my speech on the above-named subject before the International Congress of Hygiene given in some papers, I am made to say that there is nothing in the Burial Service against cremation. Will you kindly permit me to state more fully in your columns what I desired to convey? The earth to earth mode of burial indicated in the Burial Service is a quasi-cremation, whereby the body, if buried in a covering as perishable as itself, in soil sufficient and suitable, is disintegrated in from three to seven years, with harm to none, by the action of earth and air and the agency of micro-organisms. The principles which seem to underlie this mode of bestowal are—(1) that the dead body be treated with reverence; (2) that nothing be done, and nothing left undone, to the imperilling of the bodily health of the living; (3) that the dead body be treated as that which has its own function to perform in the cycle of nature in the building up of new organisms.

It will at once be seen that the prevalent mode of burial, which is nothing less than the boxing up of animal putridity, is disrespectful to the memory of the departed, disregardful of the sanitary needs of the living, besides being distinctly contrary to the rubrics of the Burial Service. With regard to cremation proper, while there is nothing in the Burial Service to hinder the interment of the ashes after the incineration of the body, and while no method of disposing of the mortal remains affects in any way the doctrine of the Resurrection, still until scientists agree that a dead body cannot be rendered innocuous by the use of disinfectants, the Burial Reform Association prefers to adhere to that mode of disposal of the dead which has so long been the practice of Christians.

I am, Sirs, yours truly,

F. LAWRENCE,
Hon. Sec. Church of England Burial, Funeral, and Mourning Reform Association.

Westow Vicarage, Aug. 26th, 1891.

Mr. W. Maclaurin, M.B., C.M.—The correspondence is too long for insertion. It would have been better for our correspondent to see Dr. ——. "*Litera scripta manet*," and such disputes are better talked over than written about. We think our correspondent's first letter might with advantage have been couched in more simple and conciliatory terms. All the same, we regret that Dr. —— did not attend the case for his neighbour, arranging terms with him, and handing it over to him on his return. Midwifery cases are fair subjects for such arrangement. We still hope that both parties in this correspondence will burn their letters and come to a better understanding for the future.

Femur is legally bound to make a post-mortem examination when ordered by the coroner, and is not entitled to a fee.

Visitor.—We discussed the subject, in many of its practical aspects, in our issue of July 4th last.

D. W.—Our correspondent is at perfect liberty to commence practice in the place he refers to.

Inquirer.—A qualification in surgery alone cannot now be registered.

MILK INFECTION AND ITS PREVENTION.

To the Editors of THE LANCET.

SIRS,—In November, 1889, I made the following suggestion:—"Every dairyman should be compelled to notify to the medical officer of health or district inspector the sources whence he obtains his supplies, and every householder or his representative who notifies as to the existence of infectious disease in his dwelling should state the name and address of the dairyman whom the person affected has employed. By such means the medical officer of health would readily be able to see what supply and how far it was likely to be the cause of any epidemic outbreak; and he could also at once, on suspicion, get the sources from which the milk was originally drawn examined, as well as the dairy that retailed it." The scheme carried out by Mr. Cooper at Wimbledon would scarcely be applicable to London or any large town.

I am, Sirs, your obedient servant,

Surbiton, Sept., 1891. F. P. ATKINSON.

Etiquette.—Dr. —— is within his legal rights; but if the doctrines we have recently laid down in our leading article on holiday ethics be right, he should hand over the case to our correspondent.

G. P.—In the case referred to, the evidence, in our opinion, was incomplete, and therefore did not warrant the formation of any definite conclusion.

"TRADE IN CHILDREN'S POWDERS."

To the Editors of THE LANCET.

SIRS,—Allow me to give you the facts of the case to which you allude in your short annotation on the above subject.

1. The powder contained half a grain (not one grain) of calomel, and some chalk as well. 2. It was one of a batch of sixteen dozen made a few days before it was given. 3. There have been no complaints from any customer; on the contrary, they laugh at the idea of connecting the death of the child with the taking of one of these powders, which are absolutely safe as a gentle aperient, and that is all they claim to be. 4. The powder was taken fifteen days before death, and, according to the evidence, the doctor attended the child for nine days or thereabout, and I may say that diarrhœa and sickness are not unusual in August.

I am, Sirs, yours truly,

New Kent-road, S.E., Aug. 25th, 1891. ROBERT WILLSON.

THE SAMARITAN HOSPITAL FOR WOMEN, BELFAST.

To the Editors of THE LANCET.

SIRS,—I wish to add a few words to the very brief reference made by your Belfast correspondent to the affairs of the Samaritan Hospital for Women, Belfast, in your issue of Aug. 29th. The hospital was founded in College-street (No. 1) in May, 1872. The present building was erected in 1874 by the late Mr. Edward Benn, at a cost of £3400. Miss Charters took a deep interest in the work of the hospital from its very foundation. She was a liberal contributor to the funds annually, and, in addition, frequently gave poor women in whom she was interested the money to contribute to the funds of the hospital the cost of their maintenance. Now, when hospital management so much engages the attention of the public and the profession, it may not be out of place to mention that it has been the custom of the committee of the Samaritan Hospital to keep the annual expenditure something less than the income, and also to invest all large donations and bequests, only applying the income to the annual expenditure. I am in a position personally to state that this mode of management had the high approval of Miss Charters, and by this bequest she has earned the gratitude of everyone who wishes to alleviate the suffering of the poor of the north of Ireland.

I am, Sirs, yours truly,

W. K. M'MORDIE, M.D.,
Belfast, Aug. 31st, 1891. Surgeon to the Hospital.

H. A. L. (Carlisle).—The practice of administering chloroform, ether, or other of the more dangerous anæsthetics by dentists without the presence of a medical man, is, we believe, by no means common, and one to be strongly deprecated. We doubt if compensation in case of a mishap could be obtained, but that is a legal point which is not quite within our province.

Mr. P. Harper Bannister.—We are unable to comply with the request of our correspondent. We have every reason to believe that the information was supplied to us in good faith.

Ethic.—The method being kept secret, there can be no doubt that its employment in a general hospital is a transgression of recognised professional ethics.

THE TITLE OF F.R.C.S.

To the Editors of THE LANCET.

SIRS,—I am a man with a considerable amount of spare time. I also read many medical periodicals, and this leads to my frequently having to consult my Medical Directory to find out who Mr. So-and-so is. Say that I find three papers by (1) John Bull, F.R.C.S.; (2) Sandy Macpherson, F.R.C.S.; (3) Patrick MacMurphy, F. R.C.S. Judge of my surprise, then, to find out that Sandy Macpherson is not F.R.C.S., but is F.R.C.S.Edin., and in like manner that Patrick MacMurphy is not F.R.C.S., but is F.R.C.S.I. It is, I hold, morally wrong to assume a title to which one is not legally entitled, for thereby the public is misled, and for an F.R.C.S.Edin. or F.R.C.S.I. to write himself as F.R.C.S. is, I hold, not only to deceive the public, but also to disparage the professional status of those who are really F.R.C.S.

I am, Sirs, your obedient servant,

Aug. 28th, 1891. M.D.

*** It is desirable, we think, to indicate whence the qualification is derived. In the case of qualifications of equal value there would be no disparagement. The relative value of the higher qualifications is a subject worthy of investigation.—ED. L.

PROVIDENT MEDICAL ASSOCIATIONS.

To the Editors of THE LANCET.

SIRS,—I read with interest some letters in THE LANCET a short time since relating to the abuse of the provident medical associations and the treatment of their medical officers. Having been recently appointed surgeon to one of these associations, and as I am the first, and no rules are yet drawn up, an opportunity arises of perhaps putting these associations on a better footing generally. If the matter could be again ventilated in your columns, this might be done by suggestions from your correspondents. A reform is, in my opinion, very much desired; for I find after I have accepted the appointment that I am boycotted by all the medical men in the neighbourhood, they having agreed not to meet me in consultation, thus refusing to recognise me as a member of the profession. Apologising for troubling you with this letter,

I remain, Sirs, yours faithfully,

Dunstable, Sept. 7th, 1891. CHAS. J. LATHBURY, L.R.C.P.Lond.

THE HYDROSTATIC STETHOSCOPE.

To the Editors of THE LANCET.

SIRS,—Having seen in THE LANCET a description of the hydrostatic stethoscope with regard to which you state it has been reserved for Surgeon Reynolds to avail himself of the conducting power of water, I beg to state that a year ago I exhibited to the College of Science, Dublin, a hydrostatic stethoscope, and it has been in daily use for nearly a year in Jervis-street Hospital, Dublin.

I am, Sirs, yours faithfully,

JAMES D. DAY, F.F.P.S.G.,
Dublin, Sept. 6th, 1891. Surgeon Captain, M.S.

H. might apply to Mr. Radley, Secretary of the Medical Sickness Society, Wynne-road, Brixton.

Student should represent his case to the Secretary of the College.

ERRATUM.—In the review of Dr. Fenwick's book, p. 490, after "delirium" seventh line from the bottom, insert "*tremens*."

COMMUNICATIONS not noticed in our present issue will receive attention in our next.

COMMUNICATIONS, LETTERS, &c., have been received from—Dr. F. P. Atkinson, Sarbiton; Mr. Armstrong, Newcastle-on-Tyne; Mr. C. E. Ansteed, London; Mr. Andrews, Ilfracombe; Mr. Bannister, Aberdeen; Mr. W. B. Brown, Leeds; Mr. Black, Glasgow; Dr. Elizabeth Beilby, London; Mr. Blunt, Paris; Mr. Baines, Hull; Messrs. Brady and Martin, Newcastle-on-Tyne; Messrs. Burroughs, Wellcome, and Co., London; Mr. T. B. Browne, London; Messrs. W. J. Bush and Co., London; Mr. Blackwood, London; Mr. Biddle, Kingston; Mr. Coleman, Cardiff; Mr. Cooper, Wimbledon; Messrs. Carnrick and Co., Bloomsbury; Dr. Cousins, Portsmouth; Mr. Dash, Stoke Newington; Mr. J. D. Day, Dublin; Mr. Daw, London; Dr. Davies, Ebbw Vale; Mr. Essex, Pontypool; Messrs. Eason and Son, Dublin; Dr. J. Erskine, Glasgow; Mr. Frowde, Bermondsey; Dr. Gilbert, Baden-Baden; Dr. Grant, London; Mr. Gibson, Newcastle-on-Tyne; Mrs. Hitch, Hollington; Mr. Heap, Cheshire; Mr. Hamilton, Ashton-under-Lyne; Mr. Heslas, Newcastle-on-Tyne; Mr. Harle, Newcastle-on-Tyne; Dr. Heslop, Blackpool; Mr. Jamison, co. Down; Dr. James, Edinburgh; Mr. Keatinge, Italy; Mr. Knowles, Manchester; Mr. W. A. Lane, London; Mr. Lothbury, Dunstable; Mr. Lamond, Glasgow; Dr. Ledlard, Carlisle; Mr. Milton, Cairo; Mr. McMunn, Crouch End; Dr. A. Macintosh, Chesterfield; Mr. McGuckin, Dublin; Dr. D. Newman, Glasgow; Messrs. Negretti and Zambra, London; Dr. R. Pringle, Edinburgh; Mr. Paulson, Loughborough; Mr. Pentland, Edinburgh; Mr. Robinson, Bedford; Messrs. Richardson Bros. and Co., Liverpool; Dr. Renton, Eyemouth; Messrs. Robertson and Scott, Edinburgh; Dr. Reid, Leeds; Mr. Roberts, London; Mr. Snell, Stamford; Mr. Sleman, London; Dr. Settier, Madrid; Mr. Salmond, Pinxton; Mr. Stern, London; Mr. Seelig, Eastcheap; Mr. Square, Plymouth; Dr. G. A. Sutherland, London; Mr. R. H. Shaw, Hemel Hempstead; Mr. Saadi, Palestine; Rev. C. S. Sutcliffe, Halstead; Mr. Lawson Tait, Birmingham; Messrs. Wertheimer, Lea, and Co., London; Mr. Yates, Liverpool; The Director-General of the Army Medical Department; Iota, London; T., London; Secretary, Western Ophthalmic Hospital; Rotunda, London; Beta, London; *Western Daily Mercury* Co., Plymouth; D. M. S., London; Secretary, Staffs General Infirmary; Omega, London; M.B., C.M., Edinburgh; Midland Press Co., Wolverhampton; E., London; Medicus, London; Sister Esther, Bradford; Surgery, London; Truth, London; Medical Officer of Health; Secretary, General Hospital, Nottingham; Timbury's Eucalyptus Oil Co., London; Femur; Studens; Editor, *Nursing Record*, London; D. W.; Tenax; Pasce; Ethic; In-door, London; A Reader; H.; W. P., London.

LETTERS, *each with enclosure*, are also acknowledged from—Dr. Sharp, Walsall; Dr. Moorhead, Notts; Dr. Bourke, London; Dr. Cooke, New Zealand; Dr. Ross, Chatburn; Mr. Brims, Thurso; Messrs. Bailly and Coates, London; Mr. Hornibrook, Bloomsbury; Mr. Lucas, Bury St. Edmunds; Mr. Brown, Newport, Mon.; Mr. James, Midsomer Norton; Mr. Evans, Dublin; Mr. Fox, Blaenavon; Messrs. Robinson and Son, Chesterfield; Mr. Blake, Bournemouth; Messrs. Watkins and Osmond, London; Dr. Halpin, Alfreton; Miss Pattrick, Tunbridge Wells; Mr. Howard, Gravesend; Dr. Borcham, Torquay; Mr. Tyte, Minchinhampton; Surgeon-Major Scott, Southampton; Mr. Turner, Colchester; Mr. Norman, Criccieth; Mr. Behnke, Ventnor; Dr. Cort, Blackburn; Mr. Williams-Parry, Wellingborough; Messrs. Windover, Manchester; Mr. Buck, Leicester; Mr. Hickie, London; Dr. Wood, Pontypool; Mr. Evans, Llandyssil; Mr. Pearson, Suffolk; Mr. Robson, co. Down; Mr. Astley, Portobello; Mr. McMaster, Perth; Mr. Ladd, Canterbury; Mr. Whitham, Lancashire; Dr. Aitchison, Blackburn; Mr. Jamieson, Aberdeen; Dr. Lathbury, Dunstable; Miss Torrington, Reigate; Mr. McCreery, Suffolk; Mr. Edwards, Leicester; Mr. Dobbs, Woolwich; Mr. Brown, Whitefield; Dr. Maclean, Blairadam, N.B.; Mrs. Coxhead, Southport; Mr. Woodford, Ventnor; Mr. Davidson, Atherstone; Dr. Sparrow, Burton-on-Trent; Messrs. Roberts and Vivian, Southgate; Rev. Mr. Dodd, Birmingham; Messrs. Stent and Son, Guildford; Col. Anstice, Shropshire; Mr. Cornish, Manchester; Dr. Griffith, Ravenglass; Mr. Ferraby, Derby; Dr. Goldsmith, Bedford; Dr. Vernon, Somerset; Mr. Thin, Edinburgh; Mr. Davids, Banbury; Mr. Ramsden, Halifax; Mr. Goldney, Bath; Mr. Heywood, Manchester; Mr. Nevin, co. Durham; Secretary, Liverpool Northern Hospital; Lex, London; Doctor, Margate; Biceps, London; Gordon Hotels Co., London; Perch, London; Fabius; Secretary, Dewsbury General Infirmary; H. G. L., London; Reliable; Secretary, Children's Hospital, Pendlebury; M. S., Birkenhead; Rusticus; Shaftesbury House, West Ham Park; E. B. H., London; Secretary, Warneford House, Leamington Spa; Practice, London; M.D., Andover; North of England Medical Agency, Manchester; Secretary, Hospital for Women, Soho-square; Medicus, Haslingden; Secretary, Swansea Hospital; E. P., London; Surgeon, Walthamstow; Secretary, North Staffs Infirmary; P. Q., London; H. D., London; Secretary, Bolton Infirmary; A. B., Colchester; Dowker, London; Matron, Southend Nurses' Institution; Os, London; Initia, London; Secretary, Bedford Infirmary; Doctor, Chepstow; Ceylon, London; Secretary, Stockport Infirmary; F. L., Cambridge; F. M., Aberdeen; L. E. M., London; London, London; C. J. P., Bristol; H. G. L. A., Yeovil; Z. Y. X., London; A. B. C., London; Noel, London; M. M., Dublin; September, London; B., Hailsham; Medicus, Margate; Yorks, London; P. A., Hatcham; Medicus, London.

NEWSPAPERS.—*Lincolnshire Chronicle, Vanoni's Weekly Sheet, North British Daily Mail, North Devon Herald, The Bulletin (Sydney), The Schoolmaster, Sussex Daily News, Glasgow Herald, Stockport Chronicle, Leeds Mercury, Scottish Leader, City Press, Yorkshire Post, Windsor and Eton Express, Bristol Mercury, Liverpool Daily Post, West Middlesex Standard, Law Journal, Insurance Record, Mining Journal, Weekly Free Press and Aberdeen Herald, Hertfordshire Mercury, Builder, Sunday Times, Surrey Advertiser, Reading Mercury, Windsor and Eton Gazette, West Middlesex Advertiser, Architect, Broad Arrow, Spectator, Local Government Chronicle, Metropolitan, Saturday Review, Chemist and Druggist, Australian Trading Journal, Pharmaceutical Journal, Manchester City News, Dundee Advertiser, Scotsman, Liverpool Echo, Tonbridge Free Press, Bury Post, Northern Health Messenger, United Service Gazette, Citizen, Madras Weekly Mail, Invention, Birmingham Post, Newark Advertiser, Bognor Observer, Dewsbury Chronicle, Belfast Standard, Barrow News, Cape Times, Oxford Chronicle, Carnarvon Herald, &c.*, have been received.

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Agent for the Advertisement Department in France—J. ASTIER, 65, Rue Caumartin, Paris.